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ABSTRACT

Sixty-four selected convention papers are presented from the 40th annual Council for Exceptional Children Convention in 1962. The papers range in length from two to seven pages. Selected topics include appraisal in the counseling of deaf clients, trends in curriculum development for the mentally retarded, emotional disturbance in deaf children, programed learning of elementary reading, the role of lay groups in teacher recruitment, American Foundation for Overseas Blind, realistic goals for the mentally and physically handicapped, prediction and measurement of speech improvement in the mentally retarded, vocational counseling and placement of the deaf, some observations on desirable qualifications for teachers of the mentally superior, World Confederation of Organizations of the Teaching Profession, programs and procedures in home teaching, a review of perceptual processes of the mentally retarded, measurement and stimulation of originality in thinking, and theoretical and philosophical aspects of laboratory experiences in special education. (CB)

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SELECTED CONVENTION PAPERS

40th ANNUAL CEC CONVENTION

Columbus, Ohio April 24-28, 1962

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The Council for Exceptional Children, NEA
1201 Sixteenth Street Northwest, Washington 6, D. C.

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40th ANNUAL CEC CONVENTION

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PRESIDENT'S ADDRESS - ASSESSING THE FUTURE OF CEC

Leo F. Cain

Since the last international convention of the Council for Exceptional Children, all of us have been witnesses to events occurring in our own countries and around the world which have been disconcerting and yet have given us new hope for the human race. The cold war has continued and in certain troubled spots has burst into flame. These tensions have shaken to some degree our personal and collective security and at the same time have made us realize that we must work harder and provide even more leadership on an international basis if our democracy is to survive. We have seen the rather rapid rise to independence of many underdeveloped countries, each seeking its place in the sun. Assistance has been given to many of these countries, and at times we have been deeply troubled, searching for the kind of help that might prove most effective for the preservation of the free world. We have all been concerned with the level of communication or the lack of such among the great opposing powers and the incidents surrounding our international conferences. We in the United States received a real lift as a nation when we finally put a man into orbit, which renewed our confidence in our ability to produce when the chips are down.

One of the most prominent issues that has continued to command the attention of our people is the issue of education. Critisism of public education has continued to be marked in all groups from right to left and many are still very vocal in their opinions on how the schools should be organized, what they should teach and what kind of teachers should be employed.

Even the exceptional child has had his share of the limelight. A large amount of recent attention has been focused on the gifted child. In the United States this has been reflected in the provisions of the National Defense Education Act, in monies appropriated by several states for the studies of the gifted and in a rather intensive look at schools in general to discover whether they are both identifying the talented youngster and making adequate provisions for him to develop his talent. Other areas of exceptionality have also been given particular notice. President Kennedy has set up a special panel to study the problem of mental retardation. National legislation has been passed to provide scholarships and assistance to colleges and universities for training teachers of the deaf and bills have been introduced into the Congress to give federal assistance to all areas of exceptional children.

Likewise there has been considerable activity in Canada. In September 1960, there was a Canadian Conference on Children held in Montreal which gave considerable emphasis to exceptional children. At this time a national report was given on the status of exceptional children in all of Canada and it should be noted that each of the provinces now is moving toward obtaining a key person in its department of education to provide leadership in the development of programs in special education. Recently such personnel have been added in Quebec, Alberta and Nova Scotia.

Again, all of these efforts are directed toward improving the quality of educational opportunity. Quality is often hard to define. In order that appropriate standards may be set, careful assessments, judgements, and reasonable understanding must be made by those who judge the purposes of any programs under study. If you will look carefully at the history of education you will find that many qualitative judgements are made out of context about education and educational systems. These judgements naturally become more prolific when any educational system is under attack. Perhaps no other organized activity of our culture, other than possibly our political organization, is subject to judgement by more people than is our educational system. This, of course, is natural in a democracy where educational experience has been common for practically everyone.

I know that all of us in this room look upon ourselves as professionals. But how many of us, with our busy daily lives and our immediate problems, have really paused to consider and think through our own basic attitudes regarding the nature and purpose of education and the professional competence we must have to create a more favorable public image and to do a better job for the children we serve.

The Council for Exceptional Children is a professional organization. As of this year it is 40 years old. We have all heard the expression "life begins at 40" which to some means that the individual who has managed to achieve this many years now has a perspective and a maturity which will make him a more effective contributor to human society. The Council has passed the growing-pains stage. From a very small organization initiated by a very dedicated group of people, it has grown to some 15,000 members with wide representation in the United States and Canada. While every organization should take stock of itself each year, a fortieth birthday deserves particular attention. Therefore, I am going to use this opportunity to report to you on the "state of the CEC".

Professional Standards

First, professional standards. These, of course, are directly related to my comments about quality in education. Every profession must have criteria or standards on the basis of which it can undertake critical self-evaluation. Such are essential if we are to improve ourselves as a profession and if we are to define our goals as a profession. The Council has been concerned about this for several years, and made professional standards the theme of its last international meeting. Currently, one of our major projects is to find some direct way to assist in setting adequate professional standards for teachers of exceptional children. Recommendations of the Council itself through its membership meeting in convention have indicated that the following should be done:

1. A plan should be developed whereby problems of professional standards are given continuing attention in CEC at all levels and by all individual members.

2. Work should be accelerated to develop standards for training programs in each special education area which can then be used in further work toward accreditation of specific programs.

3. CEC should seek to consolidate its efforts in the professional standards field with other professional organizations, and accreditation efforts should be channeled through national accrediting bodies.

During the past year, the Council has formed a committee on professional standards and is actively soliciting the cooperation of other professional organizations in the field of exceptional children to develop cooperatively a satisfactory statement of standards. In the United States it is also in contact with the National Commission on Accrediting, the National Council for Accreditation of Teacher Education, and the Teacher Education and Professional Standards Commission of the National Education Association. In order to give direction to this project, members of the professional staff in the central office are devoting considerable time to this effort and it is hoped that every local chapter, state, and province federation will give it both support and attention. In considering the sound work that has been done in previous years and during the current year, it is my hope that the Council in the future will continue to make the whole area of professionalization one of continuous study and re-evaluation. Any consideration of the accreditation and certification of teachers also needs to be expanded into the area of leadership personnel. We must continuously cooperate with all members of the teaching profession if we are to attain the professional status we need and deserve.

Relationships With Other Agencies

There are several other professional organizations and agencies which are concerned with the welfare of exceptional children. Some are professional such as ours, others are parent organizations, and still others are governmental. All of these have the same primary objective; the improvement of the status and condition of exceptional children at home, in the school, and in the community. Here again, all of these groups are interested in quality and their memberships represent a considerable segment of the public. Obtaining this quality, whether it be in education, in health and medicine, or in a wholesome home and community relationship, requires the cooperative effort of all concerned.

I am proud to report to you that for several years the Council has assumed a leadership role in attempting to obtain such cooperation through an interagency committee which meets from time to time in New York City to consider overall problems related to exceptional children. This committee, with Dr. Leonard Mayo of the Association for the Aid of Crippled Children as chairman, is composed of representatives from the Alexander Graham Bell Association for the Deaf, American Association for Gifted Children, American Association of Instructors of the Blind, American Association on Mental Deficiency, American Foundation for the Blind, American Hearing Society, American Psychological Association, American Speech and Hearing Association, Association for the Aid of Crippled Children, Convention of American Instructors of the Deaf, Conference of Executives of American Schools for the Deaf, National Association for Retarded Children, National Association of Social Workers - School Social Work Section, National Association of State Directors of Special Education, National Catholic Educational Association - Special Education Department, National Epilepsy League, National Foundation, National Rehabilitation Association, National Society for Crippled Children and Adults, National Society for the Prevention of Blindness, United Cerebral Palsy Associations, U. S. Department of Health, Education, and Welfare - Office of Education Section on Exceptional Children and Youth - Office of Vocational Rehabilitation. This interagency committee has been concerned with legislation programs, professional standards and the development of research and demonstration projects, and through the joint efforts of the member organizations, has succeeded in fostering a coordinated and positive approach toward the solution of many of our problems.

Legislative Activities

Another primary activity of the Council has been its concerted attempt to obtain program improvement for all exceptional children through effective national and state legislation. Since 1956 the Council has been actively campaigning to alleviate the single most important problem in the field of special education - the shortage of personnel - teachers, administrators, supervisors, researchers, and college and university instructors. The Committee on Legislation through its chairman and membership, has worked intensively to support federal legislation. We had a part in the passage of Public Law 85-926 which provides through the Office of Education a scholarship and fellowship program for educational personnel in the area of the mentally retarded. We assisted in 1959 and 1960 in the national study of special education and rehabilitation initiated by Congressman Graham Bardon of the House of Representatives Committee on Education and Labor. In the eighty-seventh Congress we were active in the support of Public Law 87-276 which provides scholarships to prospective teachers of the deaf, and grants-in-aid to universities to improve their programs in this field; of Public Law 87-2[illegible]4 which raises the funds granted to the American Printing House for the Blind, and of Public Law 87-274 which authorizes the Children's Bureau to make grants of up to $5,000,000 for research, demonstration projects and training of personnel in the field of juvenile delinquency. At the present time we are actively engaged in the support of House of Representatives Bill 10125 which would give federal assistance to states, colleges and universities for the training of personnel for demonstration and program grants and for support of research.

In support of all the above legislation the Council has actively sought the cooperation of other professional and lay groups and has responded to requests of the President's Panel on Mental Retardation for specific information. There is no question that there will be increased activity in the Congress related to legislation for special education in the future and also in our several state legislatures. In the reorganization of our central office we are now proposing that an assistant secretary be added for legislation and agency relations. This person would assist the executive secretary both on the support of national legislation and in providing help to our state federations wherever possible on the support of state legislation. We are also planning to initiate legislative studies on both the federal and state levels which we hope will be helpful not only to the central office but to all state and local groups as they consider both the extension of present legislation and the initiation of new legislation at each level of government.

The Council is committed to comprehensive legislation for the total field of exceptional children. To achieve this requires a legislative program which can only be implemented after careful study. I would hope that one of our objectives would be to work for further comprehensive federal assistance which would assist all states and at the same time support legislation in each of the states which would insure equal opportunity for all exceptional children.

Internal Organization of the Council

From the time of its origin the Council has been basically an organization with chapters, federations and branches, all of which have been concerned with the total area of exceptional children. As the organization has grown it has included among its membership more and more persons interested not only in the total field but in a specific area of exceptionality. Because of this there has developed within the Council organization a number of divisions. By and large these divisions have developed from an informal group of people meeting together to discuss their common problems to the presently well-structured large groups with officers, a constitution, and specific program objectives. Strong divisions have developed in the areas of administration and supervision, in teacher education, in the homebound and hospitalized, in the partially seeing and in the gifted. While certain of the divisions, such as teacher education, have been interested in all fields of exceptionality, others, such as the homebound and hospitalized or the gifted, have had one field as their major concern. Divisions have also requested time and space for special meetings at our international and regional conventions, have appointed committees to work on a number of problems and have been represented at meetings of allied professional groups. These activities have posed a number of problems for the Council, including:

1. The relationship between divisions and the Council in various projects and activities including convention program planning.

2. Representation of divisions in the government of the Council.

3. The relationship of divisions within the state and provincial CEC units.

There is no question that divisions can be a strong arm for CEC. However, our organization cannot afford to be so fractionalized that it loses its effectiveness as a strong professional voice for the total needs of exceptional children. We must find a satisfactory solution regarding the status and functions of divisions and I am sure we can do so. At the direct request of the governing board and the executive committee, the president of the Council called together last September a committee composed of both division and non-division representation to consider this major problem. The report of this committee has been forwarded to the governing board for its consideration at this convention. Further work will be done during the coming year which I hope will be a final resolution of the several problems that have been under consideration.

Publications

One of the strongest voices of the Council is through its publications. There is no question that the survival of the Council at many points was due to the fact that it was able to continue publication of its journal. Today, EXCEPTIONAL CHILDREN has been greatly strengthened under an editor from the central office with a number of cooperating associate editors. Strong as it is today, the journal must continue to improve. All of us must be concerned with the quality of the articles published and we need to have further encouragement of qualified people to submit articles for publication. ----
The Council is now sponsoring a research monograph series in addition to special publications and has committees at work studying the publication policies, developing scope and long-range direction which will be recommended to the executive committee and the governing board. Improved and expanded as they are, our publications still need further strengthening, and assistance should also be given from the central office to state and provincial federations for help in their publications. It is also essential that publications emanating from the states and provinces be of high quality. To do this poses a financial problem. If the Council is to continue a strong publication program it must realize that a significant part of the national budget must go toward meeting necessary expenses for EXCEPTIONAL CHILDREN and other authorized monographs and volumes. This needs further study and should be one of the priority items for discussion by both the executive committee and the governing board.

Membership and Money

A strong and growing membership is directly related to the strength of the Council. While we have grown in membership from 5,800 in 1949-50 to approximately 15,000 at the present time, we are still not reaching a large portion of professional personnel working with exceptional children. In order to gain membership we must have something to offer. If we can assist in upgrading the status of our membership, in having significant publications, and can show that we have sponsored and supported good legislation, we can give people who are professionally interested in the field a reason for affiliating themselves with us. Increasing and maintaining our membership, however, must go beyond this. Those of us who are members must convince others that belonging to the Council is a good thing to do both for individuals personally and for the opportunity the organization provides for them to make a more significant contribution to their chosen professional field. This cannot be done at the international level. Membership is gained primarily through the local chapters with the cooperation and help of the state and provincial federations. The central office now has an assistant secretary in charge of membership. Under the direction of this staff person this office will assume some new responsibilities and will now directly solicit renewal memberships and maintain a file of non-renewals for periodic contact. The assumption of this responsibility by Washington will not in any way decrease the responsibilities of local membership chairmen. It will free local chairmen from obtaining renewals, allow them much more opportunity for gaining new members and permit them to discuss the activities of the Council, both with individuals interested in joining and with other groups of professional personnel. The central office is also developing a systematic method of contacting all special educators who are not Council members. A series of experimental mailings to potential members will be made to the states and provinces in 1962-63. There will also be gradually developed a mailing list of all potential CEC members. These persons will be contacted periodically. The assistant secretary in charge of membership will also work on cooperative projects between headquarters and local, state, and provincial units in order that all possible assistance may be given to membership chairmen.

Directly related to membership, of course, is the budget and financial condition of the Council. The Council receives its major income through dues from members. Some income is derived from advertising in the journal, from sales of publications, and gifts, but these represent a small proportion of the Council's budget. I think it is interesting to note that of the larger professional organizations, we have at the present time one of the lowest assessments for dues. Each year it is a very difficult problem for the executive secretary to prepare a budget to be presented to the executive committee and the governing board. Our budgets in the past have been tight and we have not been able to allot sufficient funds to such activities as publications and legislative activities. If income permits, a supplemental budget to expand these and other services has been planned for the coming year. Under the present dues structure, the implementation of such a budget will have to depend on an increase in membership.

Relationship With The National Education Association

At the present time the Council is the fifth largest department of the National Education Association. I think all of us recognize that the NEA is the major professional association for teachers in the United States. In being associated with this parent organization we have ourselves gained strength as a council. We can cooperate with the activities of the other departments, discuss our common problems, and undertake joint projects of significance.

Growth of the Council in Canada

Our Canadian members represent a significant part of our total membership and they have given the organization a breadth and perspective which not all professional groups enjoy. This greatly adds to the strength of the Council. The Committee on Canadian Affairs has been very instrumental in bringing the people in special education in Canada much closer together and has been particularly effective in making special education nationally important. While there is no organization in Canada that corresponds to the National Education Association, the Committee on Canadian Affairs is fulfilling a national need in that it provides, with the help of Canadian members, leadership which has resulted in strengthening programs both nationally and in the provinces. I think we can honestly say that special education is on the move in Canada and that CEC has played a vital part in this development. In the near future we are planning a regional conference in Winnipeg and a little later on a national convention in Toronto. As our membership grows in Canada we may need to seriously consider the need for an Assistant Executive Secretary for Canadian Affairs.

Conventions

We are now assembled in an international convention. In addition to an annual international convention, the CEC has been sponsoring two regional conventions annually. The original purpose of these regional conventions was to stimulate interest in CEC in areas of the country where strong state or provincial federations did not exist and where it was felt that the overall organization's direct participants could be a benefit. This past year we had two regional conventions, one in Seattle and one in Austin. Next year we will be holding regional conventions in Albuquerque and Winnipeg. I think it is important that the executive committee and the governing board look carefully at our convention pattern. Perhaps a new type of regional meeting might be desirable, one that could concentrate on major problems such as research, teacher education, or improvement of instruction. Since many states and provinces are now developing strong CEC organizations and holding significant federation meetings, it may not be necessary that we hold as many regional conventions as we have in the past. If regional conventions can be reduced and if the central office can cooperate with federation meetings, more emphasis can be placed on our annual international meeting.

What I have said does not review or comment on a number of the excellent programs and projects that are being carried on by many groups within the council organization. Time does not permit their inclusion here but I should again like to emphasize that such activities by state and provincial federations and local chapters form the basis of the council's strength.

Our future growth and strength will be largely determined by the manner in which we assess and resolve these problems and by our willingness to look forward with a determination and breadth of vision that will insure that our accomplishments in the future will be even more significant than they have been in the past or are today. If we can do this we are assured of success.

Leo F. Cain, President, CEC, and Vice
President, San Francisco State Coll., Calif.

LEGISLATIVE PROGRESS IN THE AREA OF SPECIAL EDUCATION

Robert N. Giaimo

I am profoundly troubled by the clay feet of the American idol, by the widespread public apathy and inexcusable indifference to the problems of this country's exceptional children. It is relatively easy to stimulate public interest in the dramatic competition to conquer space. Why is it so difficult to awaken public interest to the tragic inadequacy of our special education program? Why should a country which symbolizes equal opportunity so callously deprive four and a half million Americans of an adequate education - or, indeed, any education at all?

Americans applaud and support the work being done by our government to educate the children of underdeveloped countries - but what of our own underdeveloped children? Our failure to face and deal realistically with the needs of our exceptional children represents a kind of paralysis in our social thinking. I do not know whether this stems from mere lack of knowledge, or whether it is an atavistic outcropping of the same kind of public philosophy which used to leave blind children to die - which kept retarded relatives hidden from the eyes of the world - which regarded all accidents of birth and crippling disease as the punishment of a righteous God.

You have dealt with this apathy far longer than I, but we are now on the threshold of a significant, vital step toward meeting the problems of these children, and if we are to succeed, we must marshal all our forces and arouse public attention to the crisis faced by the exceptional child.

I am speaking, of course, of our efforts to pass special education legislation. When I accepted the invitation to join you here today, I thought I would be able to report that our Subcommittee on Education had approved a special education bill. Unfortunately, we have encountered the delays which often figure in the legislative process, and we have not as yet completed our work.

We must be sure that all America knows of the great need for specially-trained teachers. Just a few weeks ago, we received figures from the office of education which estimated that 252,657 teachers would be needed by next year. But we have only 50,000 properly trained teachers today - only one teacher for every 120 exceptional children in this country. This is why we can properly serve only one fourth of these children.

Mentally retarded children alone need 75,000 teachers - more than the entire present supply of teachers for children with all types of handicaps. In addition, 32,000 teachers are needed for crippled children, 49,000 for emotionally disturbed and maladjusted children, 17,000 for youngsters with speech impairments, 24,000 for those with special health problems, over 10,000 for the deaf and hard of hearing, over 4,000 for blind or partially sighted children. And there is an estimated need for 39,000 teachers for extremely gifted children. ---- Fortunately, we have laws providing assistance for the training of qualified personnel for the retarded and the deaf. But now before the Congress is the necessity to act on behalf of every exceptional child!

You might well ask, "How could there be any problem, any disagreement, any Congressional opposition?" And indeed, how could there? How could any reasonable, intelligent, responsible member of Congress vote against this measure, how could anyone be so insensitive as to doom the blind to a life of intellectual darkness, to deny the emotionally disturbed a modicum of security, to sentence the crippled to a half-fulfilled life?

Our problem is not with the Congress alone. Although you and I are in basic agreement on the omnibus approach to special education legislation, I am sure you know that many others interested in the field of special education have slightly different approaches to the language of the bill and the provisions that they favor.

Initially, each group wanted individual legislation for its own "handicap," but we have succeeded in convincing most of them that it is far preferable to have one law covering all disadvantaged youngsters than a piecemeal series of laws, enacted through the years.

The omnibus approach assures that no area of handicap is neglected and also makes sure that children with multiple handicaps are covered. ---- The hearings which we recently concluded covered two of my bills, H. R. 10123 and H. R. 10125. Briefly, H. R. 10123 is a special education and rehabilitation act and would provide support grants, fellowships, and special projects grants in the field of special education. It would also authorize grants for the costs of establishing rehabilitation facilities. ---- The Exceptional Children's Act, as proposed in my bill, H. R. 10125, is a much broader program of federal financial assistance to the states. It is designed to encourage the expansion and improvement of state programs of special education and to aid colleges and universities to provide special education courses of instruction and scholarships. There is also provision for research grants and special projects. ---- It is my hope that the final Committee version can reconcile the opinions of as many groups as possible. It may not be as broad as some of you, and some of us, would like. But we must consider the practical realities.

If the legislation is passed, you still will have a job to do in recruiting students to become special education teachers and in retraining them once they are trained. This is a task that can only be performed in the local community or in the state. We heard considerable testimony that the colleges and universities today could train more special education personnel, if they only had the students interested in taking the training.

For this reason, I believe that we will want to make a special education bill as flexible as possible, so that training can be offered on both a short-term and academic-year basis and thus reach more prospective teachers.

I hope I do not sound too pessimistic about the future of special education legislation, for I am not discouraged. I realize that the Congress's traditional warm reception of aid to the handicapped will be somewhat cooled by the extent of the bill and the monies involved. But we shall continue our efforts to pass a meaningful bill, to recognize the existence and needs of the exceptional child, to reflect in legislative action what has been our historic devotion to equality of opportunity and status.

Again, may I tell you how honored I am by the opportunity to be with you today. I am doing everything in my power to help you accomplish your goals, but you must also help me. You must do everything in your power to awaken the public to the need for this legislation. You must encourage your friends and neighbors to write to their Congressmen, asking for their support. This is a partnership that can bear great fruit, but it must be well-organized cooperation. I would like to assure you that you and your cause have dedicated, interested friends in Congress who share your concern and your determination to solve the problems of the exceptional child.

The Hon. Robert N. Giaimo, Member of the
United States House of Representatives from
the Third Congressional District of Conn. and
Member, House Special Subcommittee on Educ.

MAGIC GADGETS AND HUMAN BEINGS

Henry H. Hill

My subject this evening is "Magic Gadgets and Human Beings." During the past few months it has been my privilege to attend meetings of selected experts, having to do with all kinds of audio-visual aids. I have associated enough with these pioneers and improvisors to know that telemation is a kind of variant created by putting television and automation together. Cybernation is another word that is knocking on the door of the dictionary. I understand this is a combination of cybernetics and automation.

During January I attended a meeting held at the Institute for the Study of the Behavioral Sciences on the Stanford University campus. I was told that underneath the 4,800 acres that Mr. Stanford left to Stanford University, there was being built a $100,000,000 accelerator. As you might quickly conclude, only the United States government has enough money to accelerate $100,000,000 worth.

And so we are surrounded, not to say dumfounded, by the kind of gadgets which are being invented and projected and just as much by the vagaries, if I may use the term, of the prophets who sometimes imply that most teaching can be done without the use of the human being.

In the meeting I attended, we were discussing the possibility of having a memory drum from which answers to questions of a bibliographical nature would come readily. The machine might even describe concisely what each article or book had to say. Of course, what the machine does or says is sharply limited by what goes into the machine.

What then is the place of the magic gadgets, particularly for those of you who are experts in the field of special education? The best rounded experts would say that the new media represent tools which, placed in the hands of or under the control of a human being, such as a teacher or student, can be of material assistance to both teachers and learners. I have been encouraged by moderate answers from some of the best experts. If they claim too much, I simply do not believe them, just as I do not believe all the alleged implications of the rapid reading process which is now molesting the country.

I doubt seriously if the purpose of reading is to see how fast we can get through a book. If you differ with me, I have no serious quarrel. You work your side of the street, and I'll work mine.

A few years ago, John Ivy of air-borne television fame, spoke on the Peabody campus, attracting a considerable number of our professors. Dr. Ivy told that in the early days of the invention of printing press scholarly monks were about to throw up their hands in panic, because what they had been taught to do and could do, namely the transmission of the scholarly heritage of the race, might now get into the hands and minds of common people. The monks were alarmed and apprehensive about the new invention.

The next day I encountered a faculty member in the office and asked him what the general opinion of the Peabody professors was about air-borne television. "Well, Mr. Hill," he said, "I believe there are a lot of monks on the Peabody campus."

And so with this brief excursion into the realm of new media, I come to what I want to talk to you most about, namely, human beings, and especially those of you who constitute members of one of the most rapidly developing sectors of our great teaching profession, to which I have devoted most of my waking hours.

In 1867, Mr. George Peabody in his letter establishing the Peabody Education Fund had this to say: "I give you, gentlemen, one million dollars ... and looking forward beyond my stay here on earth, which may be permitted to a man who has passed his alloted threescore and ten years, I see our nation, once again united, richer and more powerful than before." This was nearly a century ago, and you and I have the privilege of living to see his prophecy come true. We are the richest and most powerful nation in the history of the world.

It is time for a vision for the next century.

Perhaps no educator, no single American, can by himself create the vision of greatness for which I am hoping. Ortega, the great Spanish philosopher, says somewhere that those who were associated with a certain individual were made to feel that they had shared a vision. We need the vision, and we need leaders who will enable us to share the vision. Mr. Churchill was one who could inspire people to share his vision. In my belief, President Kennedy's appointment of a panel to formulate a plan in mental retardation is part of the vision we need for the next century. -----

I think the growth and development of special education throughout the United States has been little short of phenomenal. It has come about partly because of the vast sums of money that are available through tax sources and elsewhere for the alleviation of the needs of human beings. It has come, of course, because of energetic leadership on the part of those interested in special education. Many of these leaders are here today, because, after all, special education in its modern phase is a relatively new development.

I am normally cautious about a program which comes so rapidly, just as I would be about a library which attempts to buy books too fast. I would expect that twice as much time spent in selecting books for a library would produce a better library than twice as many books bought with less care and effort.

I would expect you to have possibly an excessive enthusiasm about some of the things you are doing, especially with regard to their ultimate value. I am proud of your advancement, but I still wonder whether we may not be adding rooms and facilities more rapidly than we are securing the best personnel and the best practices. I am not too sure that we are evaluating accurately the program as we go along. Perhaps we haven't yet had the time, but we should now begin to do more of it.

I congratulate the Council for Exceptional Children on its remarkable progress and on the outstanding benefits it has been instrumental in bringing to children and parents. Some of our literate prophets think in the next decades we shall produce more inventions and more wealth than in the past several centuries. Whether these prophets are correct remains to be seen; but we are approaching a period when we shall have the money, the time, and the available energy to make progress in any direction we wish. We can agree that we are the product of a great humanitarian tradition which has sought for several generations to raise the quality and standards of living and to give every man, woman, and child, his chance to be the best he can be.

I hold that we teachers should educate ourselves more broadly. I have asked other audiences how many books, fiction or non-fiction, good or bad, they have read during the past twelve months. What quality of books or magazines? Let us use the opportunity of continued education open to all of us, whether we be thirty or forty or fifty or sixty. I decry the narrow specialized education of a college professor -- not that it isn't necessary -- but he ought to go on beyond that.

You and I as teachers need dedication. Some of us have taught a long time. What Elton Trueblood says is pertinent: "Those who have planted shade trees with the full realization that they themselves will never enjoy the shade have caught some of the real meaning of life." I believe implicitly that this sense of dedication to the future, to the children, to a good cause -- in your case to the cause of children who need special education -- has more to do with the pursuit of happiness and its achievement than any one thing we can do.

We should keep teaching a profession and not an occupation. Our great medical profession seems to me seriously in danger of becoming a business -- perhaps not instead of a profession, but in addition to being a profession. We find doctors, at least in my section of the country, rapidly becoming ultra-conservative politically. Today they have more to conserve, and I suppose we might be subject to this same danger -- if ultra-conservatism is a danger -- if we got our salaries doubled. I would hazard this risk.

I hope too that you can share in this vision of greatness by attaining the good feeling that goes with good teaching and good students. Somehow or other it seems to me that you who are supervisors and directors of teachers in the special education field have to work out for yourselves some equivalent thrill or feeling of success with the sometimes handicapped children with whom you deal. Those who deal exclusively with the bright will have no trouble in expecting great things. If, on the other hand, you are dealing with retarded children, you must, of necessity, find a sense of achievement in the slower growth and development which may take place under your guidance.

There is room in the future for the best use of all the new aids and teaching media. In the long run, however, human beings, and especially teachers, will do more to provide an unfettered start in the race of life to all normal boys and girls, yes certainly, but in addition to extra effort for all who need it.

Henry H. Hill, President Emeritus, George
Peabody College for Teachers, Nashville,
Tennessee

ALL EXCEPTIONAL CHILDREN AS A RESOURCE FOR THE FUTURE

Margaret Mead

During the past thirty years, I've had an opportunity to talk to some people like you and occasionally to some people who are here tonight but I've never been as closely related to what you're doing and what you stand for as I am at present. I agreed to come out here tonight provided that at the end of this lecture I could ask you for some help that I need and I hope that this is going to be a reciprocal operation, because I'm up against a rather severe research problem in trying to find a kind of children. I can't find any mechanism in this country that's adequate to screen our population to find them but I'll come to them later. I'm just warning everybody, so that you'll all have a parenthesis in the back of your head, and keep wondering when I'm going to get there. Then when I finally get there, you'll be relieved instead of minding.

I've taken as my topic this evening the idea that all exceptional children are a resource. Now, I know from one point of view that this isn't new to this Association because you consistently, through all the years since Dr. Warner, being very young and enthusiastic and not knowing any limitations, helped found an Association that, as far as I can tell, nobody wanted to found at this point. She tells me each group wouldn't come in if the others did. ---- This sort of refusal to associate with other people that are as exceptional as one is oneself has been one of the ongoing problems in the United States, but this Council, as I understand it, is in favor of thinking of all exceptional children together, those that deviate from the core group in what we usually think of in a negative way, and those who deviate in a positive way. I hope I'm right in trying to form an image of the way you look at the children of the nation because it seems to me the only way you can possibly look at it is a circle. In the center of the circle are all the children that are enough like each other so that if you put them in a room with one teacher to 30 children there's some hope of their learning something. ----

The children are learning today what no children have ever had to learn before - how to live in a world that is barely born and a world in which no adult today was born or really knows how to live, that the natives of the 1960's and late 1950's are very valuable and that they need enormous care and conservation even when they're normal and usual and reducible to manageable statistics. But anyway, this is the central core, and I daresay in all your sections you argue as to who can be in it and who has to move to the periphery of the great circle and be regarded in some way as exceptional and different. But it makes a great deal of difference whether one thinks in terms of a circle or in terms of a normal curve. ----

In the general thinking of a normal curve, of course, you have all the bright people and all the superior people and all the specially gifted people at one end and all the people who are below in something down at the other end, and never the twain shall meet. This general position, of course, has been very close to a great many other American attitudes. If we instead think of a circle, then as one goes around the circle or goes out from the center of the circle by radii out to find the child with poor sight or the child with poor hearing or the child with poor coordination or the child with no sense of smell. (You might remember them, I don't think we're giving them enought attention). The child that is very slow in learning, the child with no memory, the child with all kinds of mixed dominance, the child without binocular vision - and you keep going around the periphery and you presently come to the child who sees more than other people instead of less. This is somebody we know nothing about. We have no tests, no way of defining them and no way of finding them because in almost every test that we give in this country, for any kind of sensory behavior or motor behavior, we stop when they get to normal. ---- Traditionally in the United States we have tended to take great pleasure in pulling people up who were in any way below the average.

When most other people in the world look at the United States, one of the first things they're struck with is this attempt to turn the crippled and the defective of any sort into normal, functioning human beings. Towards the end of World War II we had a government directive to the mass media particularly that said begin to put into pictures, into the crowds in movies, into short stories in the current magazines a lot of crippled people because there are a great many crippled people who are going to come out of the war and Americans might as well get used to them. But in no crowd that you look at in the United States can you find these crippled people. They've all got artificial legs and they've learned to walk on them and you simply do not see the picture of mutilated people one sees for instance in France where they join in processions and protest against almost anything and are available as a protesting group in the society. We have turned them into ordinary members of society and our whole attitude towards making up, correcting, compensating for defect is conspicuous throughout the world. I think it ought to be evaluated at its height as being something for which we have an excellent ethic, and work at very hard.

But in our general attitude towards all of those who are handicapped in any way, either through mental retardation or sensory defect of some sort or neurological defect, we think of ourselves as the donors. These are people who have a claim on us. Now when I say "us" I'm not talking about just you who are all specialists and especially dedicated to this general field, but to the American people as a whole, on their pocketbooks, on their generosity, on their willingness to help.

It's very curious that we have so little difficulty admitting inferiority in any respect. We fix it, but we admit it first, and we get all the devices and all the teaching that is necessary for the groups that are negatively placed. ---- After Sputnik we had a brief period when we thought if we could find a group of gifted people we could exploit them. They might be handy to have in dealing with the Soviet Union. ---- There was a brief honeymoon after Sputnik in which a good many communities were able to put in programs and even call the children gifted. It was dangerous but it was attempted. The back surge is beginning in many instances. It's beginning in all sorts of forms. It's beginning in the forms of the school superintendent who says, "Anybody with an IQ over 135 is going to have to take an extra course." And the kids know and they say, "So we have to take five courses and we won't get as good grades as if we took four. If we took four we wouldn't have to study at all and we'd get all A's and get a scholarship." And it's become strictly punitive behavior in which the kids now go to work and teach each other how not to get a high IQ. This is easier to learn than how to get one when you don't have one, which is also how we're being taught today.

So the situation is becoming seemingly confused, and I would challenge any educational statistician to prove that any statistics of any number were right at the moment when you have large groups of parents trying to coach their children to get a higher IQ than they've got and a whole batch of others who've learned how to fool the system the other way around.

The American people are unwilling to admit to exceptional gifts that can possibly be regarded as innate. We don't mind self-made men provided they take long enough making themselves. By the time they make a million and are ready to leave it to something, we treat them rather well and we don't mind lucky people who win the sweepstakes or win something over the radio. We don't mind them but to deal with the fact that somebody might be innately better than the average in any respect is difficult for our contemporary ethics and we had a brief honeymoon with Sputnik. What would have happened to education in this country if we put up the first satellite, it's horrible to think of. But fortunately we didn't, so briefly it was possible to make a few changes that were necessary in the school, get a little mathematics substituted for arithmetic and a few things like this and we may possibly get to the point where not only the schools can teach the children to read but where the parents are allowed to. But that's going to be very slow too.

Meanwhile, we have a really serious problem of re-defining and restylizing this whole question. Now, I think one of the difficulties is that we think of the handicapped or those that are in any way defective as someone who only receives from us and we think of the exceptional child on the gifted side whether we're dealing with a high IQ child or a child that has some recognizable or identifiable gift, which we're not very good at identifying, as somehow only taking. They take to start with, by being there. Look what they do to the marking curve. Look what happens to you when you're in a class with one of them. Everybody else's grade goes down. ---- This is more likely to occur in high school that with younger children. In other words we have defined success in schools and later in life to a degree but certainly in school, that the success of each person is dependent upon the absence of people who are better which is, of course, incredibly unencouraging to the gifted. Unless we can redefine what this is we're dividing up, whether we call it the number of A's, or the number of jobs, or the number of honors, if we could only redefine this whole picture so one person's gain isn't another person's loss. Now, we've done this very successfully in economics. We don't live in this country on an economy of scarcity and we don't believe that one person getting rich makes somebody else poor. ---- Lots of people, lots of degrees, lots of jobs, unlimited resources. If anything is going badly the thing to do is to go to work and make more, not to divide up what we have into smaller and smaller bits. But we actually act as if every single bright child either had stolen or was going to steal something from somebody with a C average and this is serious. We punish the thieves, the people who have somehow gotten more than their share of course, by talking about exploiting them. United States needs them for military effort, so whether they like it or not they'd better study science. We justify scholarships and extra funds and all sorts of things because we're going to use those people. Now, we only like them if we're awfully certain how we're going to use them so we're very unwilling to back up the gifted person who wants to experiment, wants to shift around, wants a liberal arts education or anything of that sort. They have to pay through the nose but if we can prove that they're going to go into some field where we need then now, we will support them. We need them and we will exploit them later. I presume everybody in this room has read John Hersey's "The Child Buyer" which is really one of the great well fabricated myths of our present dilemma. So we have, in spite of the efforts of the Council for Exceptional Children and your willingness to keep all of these different children together, we have a general division between the people to whom we give and the people from whom we take, only the people from whom we take we take in revenge in a sense, because we think of them as taking something from us. And I'm going to suggest that we begin altering some of our attitudes with the negative side of the curve. We begin to realize that every child who is kept alive and cared for responsibly, observed, studied and educated as far as they can go, gives something to us and is not only a recipient of our bounty, that the history of civilization consists of our increasing ability to include within it more and more kinds of people.

In a very primitive society, I've never seen a blind child - congenitally blind child. Blindness can be recognized at birth and those children do not live. I've never seen a case of cerebral palsy, birth injury, any of these children living in a real primitive society. They would be permitted to die or in some societies killed, in others simply permitted to die in different ways in terms of the mother, that other children who were strong enough and usual enough might live in a society with very limited resources. Right through the ages, we have increased in our ability to include within civilization more and more kinds of people, people with one kind of defect after another. We're just beginning to make incredible strides in the early diagnosis of infants with defects that we can deal with biochemically and as we include each new kind of person who would never have lived before, we widen our civilization. We widen the depths of our language, the depth of our perception. ---- The most retarded child, if what is taught becomes part of our tradition, has an opportunity to give us in very slow motion information about learning that we will never get from an ordinary child. And this is something I don't think we've begun to exploit. ---- If we could see that they are contributing by their existence, by the fact that they have lived and can be studied, they are contributing to our store of understanding and deepening and broadening our civilization as we have to increase it, so that more and more people can live in it and learn in it.

Now this is the exact opposite of course from the point of view that says "As our civilization gets more complicated, there are going to be more and more mentally retarded. We're going to redefine them every year and, as we raise the standard, we'll have more mentally retarded. Then when you add the genes in, in about 300,000 years we're really going to be inferior." On the other hand, the inclusion of those who would never have lived, includes many, many of the gifted who would not have lived because of some sensory defect on the one hand or some enzyme difficulty or some nutritional difficulty. We're keeping alive today all kinds of people that never lived before and who can widen our knowledge of human behavior and possibilities of human functioning.

Now I want to come to the point that I'm most interested in at the present and that is that in the field of the senses, either simple sensory behavior, sight, vision, taste, touch, smell or in the more complex points of the recognition of pattern which is one of the most specialized skills of the gifted about which we know almost nothing except that it's frightfully important. Here we have no devices for screening any school population to find these children. We stop at the normal. Some things we don't even test at all - like taste and smell. Most people don't find out they have no sense of taste or smell until they play a parlor game of recognizing objects on a tray or take chemistry. Most importantly in sight and vision, all over this country we test up to normal and stop. We do not find the children who see further and faster and wider than the other children although there is probably a range as high above what we call the normal as there is below. This is true of sight and it's true of hearing. If we could begin to include in our testing of children, finding the hypersensitivities as well as the hyposensitivities, we could save great numbers of children that are now sacrificed. I can't find these children. I want a lot of them. I need a lot of them because in this project I'm doing on the way in which children learn to relate to time and to space and to the strange in terms of the different sensory modalities, it's easy to find blind children to study and deaf children to study but we need also the hyperseers to study. Do you know where we find them? In the offices of psychiatrists and in homes for severely disturbed children, or occasionally among one's friends. ---- A few have become our most valuable social scientists and artists and natural scientists, but all over this country they are not surviving as a whole because they're not identified. So if any of you in any of your capacities as teachers or supervisors or regulators of whole states know any way in which we could begin to develop tests or even develop among teachers of children the skill to recognize these hypersensitive children, children who can hear through three floors, children who can see three or four blocks away, children who always see the actors on TV take their wigs off, children with this extra speed or breadth for seeing or incredible visual memory so that they can repeat things years later, children who hear all the things you think they don't and then you wonder why they behave so peculiarly. We need to find these children and discover what happens to them and how we can protect them because I think the high IQ child needs protection against our militant egalitarianism and we need to think that we owe them something, as much generosity and help as we owe the child with the defect. It's the child with the special gift instead of the general gift, the child with the special gift of seeing or hearing or touching or remembering with their whole bodies or moving in line with an event and or recognizing patters - these are the children that we need to find and we need ways of finding them early, preferably, I should say, under two if they're not going to be blunted and hurt.

So this I commend to your considered attention with the hope also that if anybody finds even individual children, that they write me about them so that we can begin to build up a wider roster of such children and begin to study what's happening to them. ---- So will you look for them and perhaps if they can be looked for in a context in which we think of the contribution that every different child makes to the wholeness of our society and that as they contribute to this wholeness, it is also appropriate for society to care for them equally whether they are defective in some sense or have an extra endowment in some general position. They all form part of the circle and as we become more skilled with more and more imaginative devices and with more knowledge of human behavior we can include more kinds of people into making a contribution to our developing civilization.

Margaret Mead, Professor of Anthropology,
Columbia University, and Assoc. Curator,
American Museum of Natural History, New
York, N. Y.

This paper has been prepared from a tape recording of Dr. Mead's speech.

ASSESSMENT - CAPACITY FOR USEFUL LIVING

Mary E. Switzer

The significance of the individual as the basic unit of our cherished freedom is as old as the country. The fundamental documents that stated the principles of our democracy stressed a high regard for the individual as an end in himself. Out of that regard there came the certainty that we cannot maintain individual freedom without economic security and independence, and we have interlaced that tenet with a fervor for equality of opportunity for all of us to reach that state.

These beliefs are woven into the structure we have created for the vocational rehabilitation of disabled people.

We hold that a person physically or mentally disabled is not always under a life sentence of dependency, if the disability can be reduced or removed so that the remaining talents and abilities can be utilized. In both the public and private aspects of rehabilitation, the distant beacon for our joint endeavors is the sum of benefits that would accrue to all of us if every individual had the means of realizing more of his potential capacity.

It is my purpose today to discuss the opportunities for those disabled children whom we call exceptional to grow toward a maturity that embraces a capacity for useful living. These opportunities are expanding. There is growing integration of educational, diagnostic, medical, social, psychological, and other services for the early years of the exceptional child. And as we grow wiser in the methods and techniques for vocational rehabilitation, we realize the need for closer alliance among the agencies that provide services appropriate to the young disabled child with the agencies and facilities for vocational training that may be required later for him to reach his greatest usefulness and satisfactions.

In the public rehabilitation program, we share with special education groups a serious responsibility for the future of some 4,000,000 youngsters who have various handicaps. The availability of special education, or the lack of it, has a very real influence on the vocational rehabilitation program.

In the rehabilitation program, we are confronted with many of the same planning questions which face special education. How should we deploy the resources we will have available during the balance of this decade?

We must increase services to handicapped young people approaching their adult years, that is obvious. But in what proportion - remembering the obligations we have to other age groups?

For the last several years, handicapped young people in their teens have constituted from 15 to 18 percent of the total number of disabled persons rehabilitated in the vocational rehabilitation program. In the earlier years of this program, the proportion was much higher, sometimes twice the present figure. This is readily understood when one remembers that the vocational rehabilitation program had its origin in education - that most of the state rehabilitation agencies were and still are a part of the state vocational education agency, and that the great majority of the early leaders and staff were teachers and educators.

We must gear our plans toward an increase in both numbers and percentages. For one thing, we face a sharp increase in the teen-age population during the next 20 years. The number of young people between the ages 12-20 expanded by about 13 percent between 1940 and 1960. We are told that this age group will expand by about 58 percent by 1980.

If the proportion of handicapped teen-agers continues at the level we now have in our population, the size of the job ahead of us, both in special education and in rehabilitation, will obviously grow. I would like to think that new developments in research, improved living standards and other factors will reduce the incidence of disability among the newborn and small children. Perhaps they will. But we cannot escape remembering the experience of the last 20 years or so, when our many amazing breakthroughs in science have saved untold thousands of lives -- but in the process have in fact expanded the size of the disability problem among those who survived.

This year, the federal-state rehabilitation program expects to rehabilitate 100,000 disabled persons. Around 20,000 of them will be under age 21. Based on the last study done on referrals by age, about 40 percent of them will be young people referred for rehabilitation services by educational institutions -- 34 percent from public schools, 4 percent from schools for the handicapped and 2 percent from other schools.

And we know from our experience that of more than 20,000 young people who will receive rehabilitation services next year, about 37 percent will have orthopedic disabilities; about 12 percent will have defects in speech or hearing, or deafness; 11 percent will be blind or have serious visual defects; 9 percent will be mentally retarded; and 4 percent will be epileptic.

It must be apparent, therefore, that special education and rehabilitation have made more than just a start at the cooperative task of helping handicapped youngsters to become active and useful adults. Our job then, is to broaden our programs together until we can say with confidence that handicapped young people in this country are receiving the services they need to become responsible and self-sufficient adults.

Since 1954, the Office of Vocational Rehabilitation has approved partial but substantial support for some 570 research and demonstration projects in rehabilitation. To the end of June of this year about $36 million in federal funds will have been expended or obligated for these purposes. Grants are made to state rehabilitation agencies or to public and private nonprofit groups in support of those proposals that seem worthy to a National Advisory Council that meets three times a year.

One of the first grants awarded for rehabilitation research was to a project in New York City, for development of an occupational training center for the mentally retarded on new principles. ---- Now there are 34 of these projects in 27 states. They are continuously proving that most mental retardates, with proper evaluation of their capabilities, and appropriate training, can be taught to do useful work. Many of them are in competitive jobs, and many more are working in sheltered employment under conditions compatible with their social and work adjustments.

Another area of great mutual interest is that of children and youth who have problems in hearing and speech. There has been a great surge of interest in this field in the past few years, and it has brought these disabilities into sharper focus in the total picture of rehabilitation. Many school systems have taken cognizance of the situation and are responding with more special classes for children with hearing difficulties. All the way up the age and education scales there are new concepts of how to prepare these children for usefulness in their productive years.

There are some 50 projects relating to speech and hearing. They include studies of aphasia, cleft palate, esophageal speech, stuttering, lipreading, and mental health of the deaf. Their translation into services is a current activity.

The renewed interest in hearing and speech difficulties has deeply touched the two agencies in the Department of Health, Education, and Welfare that are most concerned - the Office of Education and the Office of Vocational Rehabilitation. Perhaps one of the most significant activities of the Office of Education in this area is administration of a grant system authorized by the Congress not long ago. It will help to solve a long time shortage of personnel, for it provides additional funds to schools that prepare selected persons as instructors of the deaf.

The program will get into actual operation this fall. At the end of the academic year some 400 new teachers will have completed their special training, compared to less than a hundred this year. It is significant of a new era for the deaf. This new era is already beginning to produce fresh thought and direction. We in OVR sense new influences in vocational training for the deaf. We agree with those who advocate broad shop training which fosters adaptability in the individual. He is then better able to cope with the demands of modern living and the employment needs of a world changing rapidly in economic and technological concepts.

Another area where the Office of Vocational Rehabilitation is providing a measure of aid for the handicapped child is that of optical aids for those with low visual acuity. The selected demonstration activities within OVR research embrace a number of optical aid clinics over the country, to which supporting grants are made. The clinics utilize the services of highly skilled opthalmologists to diagnose and correct the vision of persons whose sight may be so low in some cases as to classify them as legally blind.

There are now 19 of these clinics in 17 states. One of the states that has a fine record in rehabilitation has reported an increasing use of its clinic by children, though the original purpose was to improve the vision of persons of working age.

All of us who work with and for the disabled have a fundamental working premise, whether or not we realize it. The basic needs of life are common to everyone, but capacities vary for their attainment. We have before us the goal of balancing these needs with provision of opportunity, with services, with understanding and with hard work.

We in vocational rehabilitation work under law, a wise and flexible law that gives the federal office and the state rehabilitation agencies the means and the proper attitudes to deal in humanistic terms with the lives of disabled persons.

The Office of Vocational Rehabilitation was given an appropriation of approximately $83 million for this fiscal year to meet obligations in matching funds with states for their basic rehabilitation services to individuals, for research and demonstration, and for grants to educational institutions to support curricula and staff in teaching rehabilitation subjects. The funds for the states amounted to about $65 million, and for research and training about $9 million each.

It is the task of the Office to administer these funds as wisely as we can, always bearing in mind the true function of the law, to convert dependency into independence. More than that, we have acquired international responsibilities. Two years ago OVR was given authority to operate a new program of financial support for research in rehabilitation in other countries. To do this, we make use of foreign currencies derived from the sale of agricultural surpluses to nine countries. Receipts of the sales are used for support of studies in those countries to provide new rehabilitation knowledge.

Twenty-five projects have been approved, twelve in Israel, eight in India, three in Brazil, one in Egypt, and one in Burma. They are of great depth and are directed to many disabilities. Several are concerned directly with disabilities in children. Projects relating to the effects of cerebral palsy are in operation in India, Brazil, and Israel, and an Egyptian project is looking into cardiac troubles among youths.

The Office of Vocational Rehabilitation also administers provisions of the International Health Act of 1960 with these funds. Among other provisions, this Act is the basis for interchange of scientists and researchers in rehabilitation among participating countries and the United States.

There is a wealth of rehabilitation knowledge and resources to be tapped over the world. Its development will give this country, indeed every country, added anticipation of what surely must be a world dream -- a climate of health and rehabilitation whereby every disabled child can have hope for fulfilling his aspirations through individual services that will guide and aid him into maturity.

All of us are committed. Yet you who serve the exceptional child in his earlier years can perhaps be of the greatest service. For special education, special training, the inculcation of proper values, the medical and other services that you develop and sustain in your various ways can obviate some of the necessity for special vocational training in later years, and speed his entry into a useful life.

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PART II - SECTION MEETING PAPERS

APPRAISAL IN THE COUNSELING OF DEAF CLIENTS

William M. Altemus
Amy Ann Schein

In our counseling with the deaf, we use most of the same psychological tests and techniques that are employed by other counseling centers, relying on special techniques and judgment when necessary.

In areas of behavior where adequate tests have been devised, the tests furnish evaluative information the counselor can seldom get by other methods. General impressions of people from single interviews or unsystematic observations are unreliable and subject to many errors.

Probably the most efficient technique for objectifying observation of behavior is the standardized test or testing technique. The range of material and speed with which information is gathered by tests is much more efficient than questioning or rating techniques. Conditions under which the information is gathered and the results analyzed can be kept constant and separated from the counselor's own frames of reference.

A large number of our counseling decisions are questions about a client's functioning or success in the hearing world. In one way or another, sooner or later, the deaf must function in the hearing world. They must find employment and obtain the necessary educational and vocational training for that employment. They marry and establish homes, manage their affairs and assume all of the usual responsibilities of family, vocational, and community living. They must have educational, vocational, communicative, and personal and social skills to do this.

Many tests commonly employed with the hearing provide us with the kind of information we need in understanding the strengths and weaknesses of our deaf clients. Selecting, administering, and interpreting tests are activities which are intrinsically related to the client's situation. This is not a new concept in testing, but is at times a perplexing one for us. We have the added task of accounting for the differential effects of a handicap which produces a group that is both heterogeneous and variant from the larger population upon which the tests we are using were perfected. Though our clients represent the extreme end of the distribution of the hearing handicapped in severity of handicap, the range and type of communication skills encountered varies from those few people who function about as skillfully in the hearing world as any hearing person, to those who have difficulty communicating with the rest of the deaf community.

It is known that the deaf as a group perform as well on many aptitude and performance tests as the hearing. The deaf show comparable proficiency in non-verbal performance tests of intelligence as long as these tests do not require much abstraction. It is fairly well established, though, that on performance tests where language ability enters into the performance of hearing subjects in their solution of the problems, the hearing score higher than the deaf.

Nevertheless, we have the feeling that *when test directions and methods of administration are geared to the client's communication skills*, most standard psychological tests can be relied upon to make the kind of predictions they were designed to make. That is, to furnish the kind of information we need to make judgments about present and future performance in the hearing world. This is not the whole story, however. More will be said later concerning the problems involved in testing the deaf.

Naturally, as in all intensive counseling, clinical judgment and interpretation of all information gathered (test results, case history material, school reports, and reports from referring agencies and consulting services) become the framework for the counseling process.

Frequently, we are called upon to make diagnosis and recommendations concerning clients with interpersonal, or emotional problems. It is in this area that our tests are weakest. For various reasons, nearly all the techniques used for studying personality have limitations.

Subcultural, experimental, and linguistic differences play havoc with personality test rationale. Even projective tests assume certain test behavior (that is, perceptual behavior) as commonplace, or having special meaning, according to the frequency of occurrence of these responses in the general population, and specific sub-groups.

Personality inventories rely even more highly upon empirical items which have been validated in relation to hearing groups. The comparisons upon which interpretations of personality are based for both "projective" and "objective" tests are within groups of the hearing world.

It is not enough to know that a difference exists, because the difference may mean that any individual score on a personality measure may be high or low, and to an unknown degree. The clinician, then, has only vague and uncertain information from techniques which normally form a good springboard for further clinical investigation. He must rely some on interviews, behavioral observations and experience with the deaf for his comparisons. These techniques are likely to be unsystematic and selective, but until existing tests are validated for the deaf or new techniques are developed, this is the best that can be done.

Personality is not the only area in which more information is needed concerning the deaf.

Although there are non-verbal tests of intelligence, these tests may not cover all areas of intellectual functioning that can be covered by this kind of test. Also, even for the deaf, they may not predict scholastic success as well as verbal measures.

There is reason to believe that none of the interest tests currently employed really discriminate vocational preferences in the deaf. Further, there is a possibility that many of the young adult deaf do not have crystalized interest patterns.

Even in psychometric areas of relative certainty regarding the deaf, comparisons are needed between the standard administration of the tests and the more simplified directions received by the deaf. (Even if directions are given verbatim, only parts of these directions are discernible by a person lipreading; given manually, the complete directions often must be simplified or altered into pantomime form to insure comprehension).

One serious problem in the use of psychological tests employed with the deaf is being answered. There has been a question as to whether tests could be used to predict success or failure at Gallaudet. Initial results from a study now underway at Gallaudet indicate that certain achievement and scholastic aptitude tests can be used as predictors. Multiple correlations as high as .67 were obtained with combinations of these measures and success-failure criteria.

At a conference held at Gallaudet College in June, 1960, under the sponsorship of the United States Office of Vocational Rehabilitation, research needs in the field of deafness were discussed. Three approaches to test construction were identified as follows:

1. Existing tests for the hearing should be utilized where comparisons to the performance of the hearing are desired.

2. Where existing tests (such as verbal measures of intelligence) measure essential areas, but are unsatisfactory, these techniques should be modified and restandardized.

3. New tests should be constructed and standardized for the deaf where necessary.[1]

Studies in progress and others soon to be formulated should help provide more of the normative and predictive information we need for our work with the deaf.

It is impossible to work with the deaf very long without becoming aware of the seemingly all-pervasive influence of the language deprivation associated with deafness. Growing out of language difficulties are many learning problems which plague the deaf student. Thus, for example, we find students failing courses in social studies because they can't read, students having difficulty in chemistry because they can't organize the material that is presented to them, and students having to repeat elementary algebra because they can't understand the written problems.

This past fall a Remedial Skills Laboratory was established on the Gallaudet Campus. The purpose of the Laboratory is to help students eliminate educational handicaps that impede progress in the classroom. Remedial techniques that will facilitate this purpose and help the student to meet success most readily are now being studied and applied. Since this program is in an experimental state, we will not make a report on our progress to date, although we feel very optimistic about it. We do want to make you aware of its existence.

[1] Research Needs in the Vocational Rehabilitation of the Deaf. A special report based on a research conference conducted at Gallaudet College, Washington, D. C. June 19-22, 1960. American Annals of the Deaf, Sept. 1960. Vol. 105, No. 4 pp. 335-370.

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THE IMPORTANCE OF PROFESSIONAL STANDARDS AS VIEWED BY A PARENT AND HIS ORGANIZATION

James T. Baldini

In discussing this problem of professional standards, I think that right at the start, I should make it clear that we believe that the education of exceptional children should be in the hands of educators and is a responsibility of the public school systems. There are, however, places in the United States where parents continue to run schools and conduct classes for retarded children. The reasons for the continued existence of such facilities are many; however, it is probable that the two most common reasons are either that parents are fearful that under a public school system their particular child would not be served, or that the school officials in these areas are either not interested in or not qualified to provide the necessary special education. Organizations such as the National Association for Retarded Children and Council for Exceptional Children, should be and are directing a portion of their efforts toward the provision of education for exceptional children on a professional and public basis.

As we see it, the greatest emphasis must be put on the quality of preparation of all professionals concerned with all aspects of special education. As you know, NARC has consistently acted to stimulate the expansion of graduate and post-graduate training in all areas of education for all types of exceptionalities. Federal funds are available for this under Public Law 85-926. While we are deeply concerned that approximately two-thirds of all retardates, both educable and trainable, of school age are either not being served or not being served properly, we are more concerned with quality of service rather than quantity of service. We are firmly of the opinion that with retarded children poor educational programs do more harm than no programs at all both to the children involved and to our efforts and yours to make educational opportunities available to all. Too often when a program fails to result in some measureable improvement, the fault is said to lie in the inability of the child to benefit rather to the more likely explanation that the program is not geared to the child's needs or ability to learn.

In the area of educational programs for the retarded we need more than just educators and administrators. We need people who understand the problem of retardation and what it means. Even though mental retardation is a life-long problem for all the retarded, with proper educational opportunities it need not mean life-long care, that is welfare programs, for the majority of the retarded. We ask for the services of the educator only for educational endeavors and only for those children who are capable of profiting from classroom work. While it is not the function of the educator to provide services other than those that are in the educational areas, he must have the ability to coordinate his own program with other services which children may need. The education program must be geared to fit into continuing efforts in the vocational fields which will most likely follow the purely educational experiences. The educator must understand and be able to work with the people in the vocational rehabilitation programs so that the eventual product of both these programs will be a person who is as independent as he can possibly be. The transition from the purely educational to the purely vocational must be a smooth one and in fact it would probably be best for elements of one area to be encompassed in the other as a standard procedure.

The ideal professional in this area must also be able to work with parents. Retardation creates a situation that is charged with emotion and engenders in parents great amounts of energy. The professional in education must be able to take part in channeling this energy into useful pursuits. ---- He must be adept at parent counseling and be able to explain in language that a parent can understand, the child's needs and how they are being met in the school. He must also be able to enlist the parents' cooperation in complementing the school program with a desirable home program. The school experience which takes place during four to six hours, five days a week for nine months a year cannot be an isolated experience if it is to do the maximum good. There is a need for persons who can enlist parent participation.

The educator at all levels from the classroom up must be able to recognize and understand meaningful research. This is a most important area for consideration and I would without qualification recommend a thorough grounding in the scientific method and design of experiment as a requirement in the training and basic education of educators at all levels, whether or not they plan to enter the area of research. Before a person can determine whether or not he should apply the results of a research report to his given situation he must be able to evaluate on a non-biased basis just how valid the research is.

Recently I saw a report based on a study of a day school program presented as a research report. One of the conclusions was that trainables on the lower IQ range made gains only to the age of 11 and that school programs beyond the age of 11 were of questionable value. Nowhere was any mention made that perhaps the particular program in operation made it impossible for these particular children to make any gains past 11. Another conclusion was that persons not trained as teachers, but talented in handling children, made effective teachers of trainables -- but nowhere in the work could I find any comparison between the progress of trainables under qualified teachers and the progress of trainables under people just talented in handling children.

In summary, we want people with specialized training of high quality. They must be able to adequately assess the needs and provide for them. In the area of the new, that is research, they must be able to distinguish between fact and fancy. They must be willing to change their programs in light of new knowledge. They must be able to work with parents. The fact that people with all these qualities may at this time be impossible to come by should not be a deterrent to us in our efforts to provide first-rate, top quality educational opportunities for the retarded.

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SOCIAL COMMUNICATION FOR THE MENTALLY RETARDED

Bernice B. Baumgartner

The focus of social communication, in curriculum development for the mentally retarded individual, is this man, woman, or child -- with his personal and social needs. It is his living in the family, the school, the community and in society. Each of these human beings has thoughts and feelings. Each is entitled to live with dignity, happiness and usefulness.

Many school people feel that the individual approach can be used to help this person, even though his mental capacity is limited. This approach takes into account each pupil's uniqueness -- his individual strengths and his individual weaknesses; his specific design for growth and development.

The Individual Approach

As the boy or girl expresses himself, he learns to observe and translate observations into his own concepts. He may proceed by not looking when shown an object or picture that does not relate to his personal experiences. He may look without expression, watching, because it is the thing to do, observing and relating himself to the environment without action or expression. (The teacher may not be reaching him). He may observe changes in the environment. If so, the perceptive teacher will note the clues. Then, the pupil may watch and sustain interest for a period of time, recall a sequence of events if he can act them out.

The pupil learns to listen, as he observes and moves. He learns to respond to noises he hears -- loud noises, refined noises. He learns to distinguish between sounds of different volume and pitch. He learns to listen to instructions, sustaining attention for longer and longer periods of time. Then, he may learn to recall the sequence of events in a story or a record he has heard - if it is a part of his real experiences.

Long before this boy or girl learns to speak, he learns to communicate through bodily movement when there is someone to communicate with him. Early expression may take the form of following the teacher with his eyes; babbling and screaming to get attention. Stages of development may include:

Stage 1, in which the individual lives apart from or within self

Frequently, teachers speak of lack of reactions or acting out reactions in newly organized classes, where children and teacher are not too secure in their surroundings - before routines are established or when a new child is admitted to a class. At such a time, a child may seem unaware of an activity or, like Jim, scream excessively without obvious provocation. In time, Jim begins to move closer and closer to the group -- reaching out -- almost testing the possibilities and thus, the less desirable reactions subside.

Stage 2, in which the individual uses gestures and physical action

Children, who express themselves through bodily movement, may rock back and forth, lead an adult to what they want, act out what they want, act out their needs, grab or hit to get attention. Each has his own mannerisms. For instance, Janie comes to me and claps my hands with her hands. Danny, a little cerebral palsied youngster rocks back and forth as he taps me on the back. He is asking me to say, "Danny, I know you can say hello. Let's hear it." Nearby, Mary whirls round and round as she listens to the music from the piano -- in readiness for the puppet dance.

Stage 3, in which the individual uses sounds to convey meanings

Frequently, children begin to vocalize when excited. They produce simple sounds, babble, use expressive jargon as concepts begin to break through. Mitchell's first verbalizations were whining sounds as he asked for the big ball he likes to throw. Billy responds with an "uh, uh, uh," his eyes shining, while pointing excitedly at his finger painting.

Stage 4, in which the individual imitates actions, sounds, words.

Imitation will take various forms. Many children respond to actions in clapping, stamping. Johnny sits still, but reaches the high and low tones in an action song. He has no words. Another child repeats the gestures of a finger play, while others repeat the words of the finger play with the teachers.

Stage 5, in which the individual attempts spontaneous verbalization

When encouraged to express inner feelings, words begin to emerge that reveal glimpses of personality. Joseph's first words were "more paste" as he became involved in an art project. Thirteen year old Mary said "Anta Caus" a year after she saw Santa Claus. Henry called "Miss Jones" from his wheel chair. What an accomplishment for Henry! With others, "good-bye" grows out of waving. They identify the things they understand by name. And for many, an emphatic "no" precedes all other spontaneous speech.

Stage 6, in which the individual converses with others

Just as any other children, some mentally retarded individuals speak only when addressed, while others talk exessively. There are questions about people and things. Questions give clues to inner thinking, such as; " Why does Harold cry?" "Where are the clouds?" "Have they gone away?" "Eight o'clock?" "Going home?" Others delight in giving commands, in relating experiences. The ultimate is the initiative in conversation as the individual reaches out and is allowed to continue to reach out and grow.

Such are some of the responses elicited in social communication as the individual begins to express himself with and to others; as he grows through personal to social development. Each child does not go through each stage in the above sequence. Some boys and girls amaze us as all of a sudden they begin talking about the least conventional ideas.

Since improvement in the child's development plays a major role in his further growth, parent and teacher should be constantly alert for clues that indicate an advance. If he is quiet and inactive all day, . will not learn to communicate. He must be allowed to make mistakes and to grow in his own way.

Plotting the Course

Educators plot the course for such individuals by different routes. The realistic administrator plans for a program of continuity from the early identification and the diagnosis of a child in a school population, for as long as the individual can profit. Each teacher takes a segment of the total plan and fills it with experiences in living on a level, beginning with the individual pupil. The teacher and parent take clues from the pupil. The teacher's luggage contains the tools needed to transmute the individual's actions and efforts into social communication. The teacher is equipped with accessible experiences of movement in play, music, arts, dramatics, excursions, household arts, industrial arts, physical education and any of the language arts or number concepts the individual can utilize to advantage in living. If possible, there is team teaching, in which students benefit from the strongest talents of several teachers. This gives students and teachers added mental stimulation. In the secondary age group, it gives them a sense of added prestige, because of closer approximation to the program in the "regular classes." Prestige is reflected in the bodily movement of the "most talented" educable mentally retarded individual as he grows taller by inches, when treated like "a gentleman" and allowed to act like one.

All concerned with curriculum development must be equipped with insight, understanding and ingenuity. The administrator, teacher and parent must be capable of weathering the storms of conflict and tension. They should have the capacity to be puzzled, to concentrate. There must be a willingness "to be born" each day. This requires the ability to let go of something as new clues point the way to a child's needs. Such assets require courage and faith - the courage and faith of knowing this man, woman, or child can be helped. It involves the ability to see and to respond, to allow each individual to grow into himself through his own expression in play, in work, in getting a job and in getting along with people.

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TRENDS IN CURRICULUM DEVELOPMENT FOR THE MENTALLY RETARDED

W. G. Bates

The information provided in this paper was obtained mainly by collecting data from a few representative states and provinces, and checking it with a limited amount of literature in this field. Curriculum was conceived in its broadest sense and from an administrator's viewpoint, making it desirable to examine environmental factors as well as the program offerings. This meant taking a look at objectives, at teachers and techniques, administrative arrangements which indicate the evolving philosophy, at program aspects which are developed to attain the established goals, and at efforts to establish a place for these young persons upon their completion of school. The study was confined to day schools because of complications from the concept of curriculum adopted and because of time limitations, although it was recognized that state or provincial training schools, with their lengthier background of experience, do have much to offer.

Trends in Enrolment

From replies to questions regarding trends in admission or exclusion policies and class load, it appeared that usually the same policies remain today which have prevailed for the past few years. Any deviations from the usual admission criteria were, from the sampling, stated for so few areas that they could not be said to indicate a trend. Nevertheless, Dr. Lloyd Dunn was kind enough to permit use of a rough draft copy of a chapter from a book to be published in a few months in which this statement appears in part: "... However, there has been an upward shift in those IQ limits toward the 40 to 60 bracket. A number of school systems now set their basal at 35 and their ceiling at 55, allowing a 5 IQ point variability at either extremity when other factors dictate...." (Dunn, 1963). IQ ranges in this survey were from 20-50 to 30-60 to 40-60; the beginning chronological age ranged from 3 to 6 years with the usual maximum of 18 years or older. In the instances where higher IQ levels only were admitted, reference was made to lower ability children being cared for in day-care centers. It did appear that the general policy is to admit on a trial basis children of various capabilities through different selection processes but, once admitted, there was no suggestion that the "trial" period was anything but permanent. This may have been due to limitations in the questionnaire and its points of distribution. A common practice for admitting pupils was said to be that of team judgment.

The numbers of pupils per room was reported to vary from as few as 4 to as many as 20. Averages were stated to range from about 8 to 15 with the usual number being 10. Apparently experience has proven that the numbers which can be handled vary with age and handicaps.

Trends in Objectives

According to the interpretation given to answers in questionnaires, there appears to be minor shifting of objectives. These trends may be stated generally as placing less emphasis on developing these children academically and more on developing them in independence and communication, in social and motor skills, in diversional skills, in personal qualities, and in their abilities as contributing members of society. These may include with some variations as to order of merit, all or almost all of those outlined by Connor and Goldberg (1959), or with those in Johnson's report (1958) to the New York State Interdepartmental Health Resources Board.

It appears that originally an attempt was made to explore the useful content of regular school programs and to modify and supplement this. Perhaps this was due to insistence by parents that "schools" be established and "teachers" hired to instruct - a means of getting public bodies to support these ventures and a reflection of the hopes of parents for their children's academic achievement. Later, because of the limited academic successes, concern over the future of older children, and because there were few post-school opportunities, more attention was directed toward realistic "vocational" goals.

Trends in Grouping

In localities where grouping is possible, it was reported as being achieved usually by considering such pupil factors as intelligence quotient, the special needs of the individual, social, mental and chronological ages, physical status, and by the factor of teacher personality. If one can detect a trend from the reports, it would be that of providing more flexibility in grouping based upon the combined judgment of teachers and other specialists after performance and personal traits have been observed.

Trends in Programs

As one would expect after hearing the main trend in objectives, the school programs were reported to emphasize less the academic, especially for lower ability children, and to devote more activities toward language development, independent and social living, and to work habits, attitudes, and skills. Even the academic teachings were said to be directed more to those skills necessary for living at home, in the neighbourhood, and in jobs. My interpretation of the reports is that there is a growing recognition that these children will not become literate and there is no good reason to spend time trying to make them so at the expense of other useful skills; also most of these children are to live at home for some years and then possibly move to residential training schools or other protective environments, so home, group, and institutional living skills are developed.

Reports show evidence of planning programs so that pupils are exposed to more than one teacher or other specialist.

In the area of preparation for economic usefulness, reports indicate varieties of programs in the schools, at least in part dependent upon the presence or absence of post-school facilities or programs. Mention was made of training in good work habits, attitudes and simple skills, in adaptability and conformity to different types of situations, of placing pupils in jobs for training, of obtaining enough sub-contract work to train older pupils so they can enter sheltered work activities either in workshops or day-care centers, and attempts by schools to give complete "vocational" training. It appears that where post-school services exist through workshops and/or the Office of Vocational Rehabilitation, school vocational programs are adjusted according to needs; where there are no such services, the school tends to provide whatever activities and services are possible.

Reports on trends with respect to isolation from or integration with other children suggested that at present most schools for the trainable are isolated geographically from other schools, and there was no indication of intended changes except in isolated instances where either the goal or practice was advanced of having these children housed in regular schools or on the same grounds, or with other handicapped children, even though in many areas the operation of these schools had passed on to regular school authorities. This physical separation makes integration of play or school activities difficult, but indications of encouraging wider associations by inter-visitation and in extra-curricular activities were reported.

Equipment used in school programs may reflect some program changes. There was some indication that this may now be less "academic" while more and better use is made of sensory and motor aids as well as of household, yard, and vocational equipment.

Trends in Employment of Qualified Teachers

The most definite trend indicated by respondents is that of employing certified teachers. Replies stressed personal suitability of teachers, mentioning such traits as love for children, understanding, patience, ingenuity, and dedication. Almost without exception the practice was reported to be that of hiring certified teachers when they are available, except in some locales where chapters operate these schools. Both legislation and grants are used either to encourage or compel the hiring of teachers with required training although these requirements seem to vary from minimum certification to highly specialized training. Few areas reported employing teachers as vocational or home economics instructors and, where this was said to be done, there were problems about the availability of certified teachers. Mention was made of the employment or use of persons trained as psychiatric nurses, social workers, psychologists, remedial gymnasts, physiotherapists, and speech therapists.

In some advanced areas elsewhere, it apparently is not common practice to employ teachers certified in the usual way. As an administrator, I fully appreciate the importance of specialized training and of control through certification. Also, I recognize the value of having teachers in these schools who are able to receive pupils from different types of classes and prepare pupils for entry or re-entry into such classes. Nevertheless, all of us need to continue to look seriously at the kinds of persons who train these children and the types of training which they should have.

Trends In Supervision

Supervisory functions were reported to be carried out by private bodies operating classrooms, by travelling consultants employed either by the association or the state, by technical advisory committees, by superintendents of schools, by boards of directors, by university specialists, and by psychologists. Distinctions were not always possible from the replies, but the general impression as to trends was that supervision is becoming proportionately a larger function of regular school authorities at the local and/or state levels and a smaller one for private operators of these schools.

In addition to this partial transfer of function, steps were said to be taken to strengthen supervision. With greater public acceptance of responsibility and more public funds invested, larger numbers of state and local employees are assigned to provide leadership and training. According to Gardner and Nisonger (1962), 38 states place responsibility for these special class programs upon public school systems. It is known also that some provinces have acted similarly. The inevitable should be betterment of supervision.

Trends in Post School Facilities and Opportunities

It appeared from returns that the vital and difficult problem of providing community facilities of a social and vocational nature are being tackled gradually. No uniform pattern seemed to emerge but approximately one-half of the reporting areas stated that sheltered workshops are now available, at least on a limited scale, and that others are to be established; that activity centers are being developed; and, in one province, terminal-type occupational centers are being established. It appears that community agencies, school boards and government departments are developing programs and facilities to meet the needs of older trainable retarded either in conjunction with, or, as in the usual case, entirely separate from school plants. It appears also that communities are at least slightly improving their abilities to arrange placement in jobs for a few of these children. These developments place additional responsibilities upon schools to alter and coordinate their programs for pupil advantage.

Trends in Research

If one may draw conclusions from replies on research, they would be that in Canada most of this research is medically oriented, based on cause, treatment and prevention of retardation, while in the United States this is supplemented by educational, social, and psychological research.

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THE TEACHER'S VIEW OF THE EDUCATION OF JUVENILE DELINQUENTS

June Bayless

Unpredictable enrollment time is a handicapping condition inherent in all educational programs in juvenile detention facilities. Looking at the summary figures of Meyer Hall (juvenile detention building) for the month of February 1962, we find 41 children were enrolled -- 27 boys and 14 girls. School attendance records reveal the average daily attendance for boys was 14.8 days and 8.85 days for girls. The grade placement of these children ranged from grades 5 to 11 and chronological ages from 12 to 17 years. Accommodations for 15 boys and 11 girls are available at Meyer Hall. In planning an educational program for this constantly changing population much flexibility must be retained.

The first contact with these children and our school program is an enrollment slip placed in the teachers' mailbox following the child being brought to Meyer Hall by a Probation Officer of Juvenile Court or some other agency, such as Catholic Charities, Iowa Children's Home Society, etc. This slip gives the date, name, age, birthday, school last attended, and sometimes a brief remark as "truant", or "incorrigible at school or home."

An initial intake conference is held with the child as soon as possible. We solicit information concerning the home, background, present school program, progress in various academic subjects and hobbies and interests. An opportunity is given for him to talk about his school problems as he views them but direct questioning is avoided. If the child is given an opportunity to talk in a semi-nondirective interview, a more realistic picture of the child's background and interests will be revealed. School rules are explained and a Wide Range Achievement Test administered. Scores earned on this test are used as guides for placement in our various groups. The grade placement of the child at entrance is not decisive. He is taught at the level he is achieving when we begin working with him. The emotional strain of a child in trouble can often result in a depressed academic performance. Since most of our children have had negative school experiences, one of our main objectives is to try to modify the attitude that has developed and enable a positive, construcitve school experience to take place. The wide range of differences we encounter include not only variations in mental abilities and achievement levels, but environmental backgrounds and goals for life.

Telephone contact with the school follows the testing, to provide us with additional information. Information we seek consists of test results (achievement and psychological), attendance records, grades, and problems encountered by the classroom teacher. Test scores obtained on our testing are reported at this time to the school. If the school program is to be continuous when the student returns to regular school plans are set up. In cases involving students achieving at or above grade placement this is important to prevent loss of regular school credit which might further compound the existing problem. We have found the schools to be most cooperative in providing us with information and appreciate our information for their records.

A second conference is held with the student when test scores and school information have been assembled. At this time his test results are explained and weaknesses pointed out. ---- Work is always initiated in the areas in which the student is most proficient. Usually in a day or two the new student sees others getting special help and will come in and ask "Aren't you going to help me with that arithmetic?" When that happens, you're "In" -- teaching something a child wants to know is wonderful. Special individual or small group instruction can be set up to meet the particular need. In most cases involving severe retardation in a particular subject, instruction is individual for a day or two before joining a group is feasible. The majority of the boys and girls have a realistic assessment of their school performance and want to improve.

Instruction at Meyer Hall is a team teaching project consisting of two teachers. We plan for individual, small group and total group instruction. At times one of us in in charge of the total group with the other assisting. Sometimes individual help is given one student as others work in groups. Sometimes one of us works with the boys and the other with the girls. This is determined in part by the makeup of the total group.

About 50 per cent of our time is spent with reading, spelling and arithmetic instruction, to provide remediation for scholastic deficiency. Spelling instruction is taught in three groups. One group (usually one to three) having severe learning disabilities work with special methods as that advocated by Frenald, a second at the elementary level and a third group on a secondary level. Individual lists are kept of words missed on daily lessons and each group uses the cumulative list of all members of his group for daily lists. This learning is closely correlated with our reading instruction. Quality of handwriting improves as spelling improves. Many times it seems poor writing is a facade to cover possible spelling errors. Spelling groups are regrouped on Monday with necessary adjustments being made during the week. Moving from one group to another adds incentive to achieve. In the past year we have had as many as five and as few as two spelling groups to meet the needs of our enrollment.

Reading instruction is a dual approach of developmental and independent activities. The majority of the total group works four days a week on materials from the S. R. A. reading laboratory. This provides for progress at various levels. Selections are short and appealing and materials can be checked by the student. As difficulties are noted, small groups having the same difficulty are formed for follow-up instruction using material from other academic areas wherever possible. Special work sheets are devised to provide material suitable for the problem.

Independent reading is encouraged in free time and after school hours. A list of materials read by each student is kept. As books are returned the reader fills out a card giving his reaction to the book. Saying "I liked it" or "I didn't like it" is not sufficient. Just the other day a boy returned a book saying "That's the best book I ever read -------." A comment "Oh, that's the best book you ever read" resulted in a lengthy expression on how he felt when he finished the book. These cards are filed and once a week group discussions are held with each youngster using his own comments to help him participate. If more than one has read the same book it is not unusual to have spirited discussions. At this time "The Black Stallion" books of Walter Farley are being eagerly read by a group consisting of one girl and four boys. A couple of weeks ago most of the girls were reading "The Little House", series of Laura Ingalls Wilder. Adventures of Tom Sawyer, Swiss Family Robinson, Treasure Island, and many of the long time favorites are eagerly sought. It is surprising how a favorable comment by another student is the basis for adding another book to someone's "I want to read list". A large selection of magazines and comics are available. ----

In arithmetic we group for needs of the individual. Every paper is carefully analyzed to determine the cause of errors. Faulty combinations are pointed out and listed on the individual's drill sheet. Groups are formed for work with whole numbers, fractions, decimals, percentage, and advanced mathematics. In attacking a deficiency,work from a fifth grade book may be used one day, moving on to a seventh grade text the next. The process and results are more important than the grade level of the material used. In making assignment long pages of drill work are avoided. For instance, we sometimes assign the odd numbers or even numbers, or every third problem. If a score of 90% or better is attained, they need not work the remaining problems on the page. This appeals to the student and work is carefully checked for accuracy before handing it in. Much "testing, teaching and retesting" takes place. Promotions from group to group depend upon progress. From time to time areas taught are retested to assure retention. Everyone takes the sections of this group test in which he is expected to perform.

Social studies, Science and Health are taught by units. We use the television series provided by W-O-I Iowa State University which is presented on the 5th and 6th grade level. We also use our local educational T. V. station. Follow-up activities are graded up or down to enable all members of the group to participate. Finding materials suitable for everyone is a problem. Bulletin boards are often a project that grow out of these programs. The television programs are supplemented by suitable films and film strips.

Communication between the various supervisors, interested agencies and all people working with each case is constantly sought. Joint staff meetings of all Meyer Hall personnel offer an opportunity to share experiences. When clinical, probational, and counseling workers visit the students we make our time availalable to share information we have learned and often seek their help in interpreting our material and planning future programs. A statement from Konopka (1962) summarizes the attitude of all our staff members:

> "Every member of the staff must serve according to his competance, as consultant to other staff members. A treatment atmosphere is possible only through team work in the best sense of close interaction and staff members' respect for each other."

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THE ROLE OF STATE DEPARTMENTS IN RESEARCH

S. J. Bonham, Jr.

Most of you are familiar with the literature dealing with "the lag theory" (Ross, 1958) in "the adaption process" in education. This theory identifies 7 steps in the general adaption of new ideas in education.

1. The emergence of a need
2. The recognition of the need
3. The definition of the need
4. The invention of ways and means of meeting the need
5. The introduction of the invention into one or more communities
6. The improvement of the invention in actual practice
7. The diffusion of the invention throughout the schools of the state.

Historically state departments of education have tended to enter into this process with considerable effectiveness in the latter steps. State departments of education can provide vital leadership very early in the process by assuming an active role in the educational research activities of the state.

Initially, department staffs were created to enforce state standards through inspection of local programs. Since World War II a significant change has occurred. To quote from an Ohio source (Horn et al, 1961):

> "The most common local problem in Ohio today appears to be the need for leadership and assistance in identifying, developing and maintaining optimal special education programs and services for exceptional children".

If state department personnel are to provide the leadership and assistance that local schools need it will have to be done on the basis of sound research findings. Program improvement, expansion and development should not be attempted unless it is based on research.

The Problem

Few local school systems can afford the luxury of organizing for research as well as operation. Research is an additional burden which must usually be added to the leadership in a school professional staff system which is already carrying a load of work and pressure for 60 hours a week. To approach such people with requests for permission to conduct studies of esoteric or academic interest, or even studies that have limited practical values, is an imposition that should be avoided.

Many graduate students seek to avoid this problem by attempting to identify practical and manageable topics for papers, theses, and dissertations. Local school systems are frequently faced with problems for which they have no immediate practical answers. Such a problem is increasingly approached through research and experimentation.

Types of Research

There are a number of forms that research activity should take. The status survey is generally used to determine the present situation, to establish accepted practice, or to identify emerging needs. While it is not considered to be the most sophisticated form of research activity a great deal more needs can be done with this technique.

With new data processing techniques and carefully designated instruments, the wealth of useful information that can be obtained from this form of research continues to surprise us. In addition, comprehensive surveys of this type have not been conducted in many established areas of special education for thirty years.

An example of a status survey can be found in Ohio's recent publication "A Look at Ohio's Gifted" (Stephens, 1962). A state wide survey of gifted program, it was conducted with a questionnaire designed for use with data processing equipment. Certainly the results contain information concerning both present status and emerging trends. More important, some critical problems were spotlighted through this survey which will require considerable research.

The experimental project is often the least sophisticated form of research activity. Nevertheless, it often proves to be the most productive in terms of useful outcomes. It is in such projects that the new theories, new conclusions, and new solutions to problems are put to the acid test of reality.

It seems desirable to approach most changes in established programs as well as new programs in special education via this route. An example of this type of research can be found in Ohio's experimental project for brain injured children (Allen and Grover, 1961). This project is now completing its fourth year and is reported in detail in another session of this convention. The project has contained several research studies within it dealing with identification, programming and medication. As a result of experience in this project, standards for a state-wide program for brain damaged children will be presented to the State Board of Education this spring.

The research study is usually thought of when research is mentioned. Normally it deals with the search for new relationships and new conclusions with rigorous statistical controls. The problems inherent in such an approach in the social sciences often force us to deal with small and insignificant aspects of a total problem. On the other hand this approach is frequently the only avenue to new knowledge about children.

To demonstrate several points perhaps another example can be selected from Ohio. Recently, the Division of Special Education initiated a research study to determine the validity of the Leiter and the WISC in predicting academic achievement in deaf children. The study was carried in cooperation with the Dayton City Schools and the statistical work is being done at Ohio State. This study was initiated by the Division because of the question that existed in both day school placement and in the clinic for deaf children operated by the Division. The results will be published sometime this summer.

The Role

In discussing the specific role of state departments of education in research, the following function should be included.

Identifying Research Needs

A state department staff should be active in identifying research needs in programs for which it is responsible. One approach to this might be through a state-wide meeting of leadership in special education to prepare a list of research problems that might be used as a reference list for local school people, university personnel, and department staff.

An example of this approach is found in Ohio's research program for gifted children. Many of the studies being carried out under this project were suggested by a state-wide advisory committee (Stephens, 1961).

Initiating Research Programs

A second function that could be assumed by state department personnel is to initiate research programs. Such effort might be directed to establishing new programs for services or they might be directed to improving established programs.

An example of research leading to a new program is the experimental brain damaged project previously mentioned. The research study on deaf children might be considered as an example of an attempt to approach a problem in an established program.

Promoting Research Programs

Perhaps the state department of education can have its greatest impact in promoting research programs. Several examples of this are available in Ohio. A new research program for emotionally disturbed children has just been announced by the Division of Special Education. Local districts have been invited to submit proposals. Division staff are available to assist in preparing proposals and those approved will receive state reimbursement through the foundation program. The Division has included items in all state board standards which permit approval of programs outside standards for research purposes. Finally, the department has included research and publication as one of the responsibilities of people employed in the Division.

Disseminating Research Results

Finally, state departments have a major responsibility for disseminating research findings. This can be done by publishing and distributing research reports, by sponsoring journals which carry research articles, and by encouraging local school personnel to publish research.

Examples of this may be found in some of the Division publications which are on display at this convention. Next fall the Division will publish the first issues of a new journal in school psychology and mental retardation which will be edited by university personnel employed in position partially financed by foundation program funds.

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RECENT RESEARCH ON SCHOOL PROGRAMS FOR THE MENTALLY RETARDED

William R. Carriker

The purpose of this presentation is to review some of the research, pertaining to school programs for the mentally retarded, that has been completed or is still in progress that have been supported by the Cooperative Research Program of the U. S. Office of Education. This Program is an extra-mural research program designed to support research dealing with significant problems related to education. Of course, special education is one important area of educational significance.

The importance of this area is exemplified by the fact that the Cooperative Research Advisory Committee, consisting of 9 outstanding researchers from throughout the nation, each serving a 3-year term, have in the past five and a half years recommended to the Commissioner that approximately 500 research projects be given federal support. Of these, over one quarter, or approximately 27% are concerned with problems directly related to special education.

Of the 131 special education Cooperative Research projects, 76 pertain to various problems of the mentally retarded. My comments will be primarily concerned with some examples of the 76 projects (some completed, others still in progress) that are more or less arbitrarily categorized under six headings: (1) Identification and Evaluation of Mentally Retarded Children; (2) Effectiveness of Special Classes; (3) Performance on Various Learning Tasks; (4) Auto-instructional Devices; (5) Speech and Hearing; and (6) Physical Coordination and Development.

Identification and Evaluation

Example 1 - Inability to read, lack of intelligible speech, and a short span of interest make it nearly impossible to test young handicapped children and obtain an adequate measure of their ability. Dr. Lloyd Dunn, George Peabody College for Teachers, has developed a standardized picture vocabulary test usable with children as young as 22 months and as old as 18 years. This scale provides a measure of hearing vocabulary and verbal intelligence which overcomes many of the existing problems of identification of ability in the mentally retarded.

Example 2 - This study was not supported by the Cooperative Research Program; however, it offers real possibilities and ought to be mentioned. The test is entitled, The Illinois Test of Psycholinguistic Abilities and has been developed by S. A. Kirk and J. J. McCarthy. Their test is designed for diagnostic use. This extends beyond the Binet or Wechsler classification approach into a diagnostic assessment which leads to areas needing remediation. As Kirk has said, "An educational prescription." This, of course, is not new in that clinicians have for example attempted to appraise and use psychometric tests in diagnosing such defects as aphasia, dyslexia and the like. Evaluation of the primary mental abilities also might be considered differential diagnosis. The ITPA is an attempt at diagnosis in the psycholinguistic field and is described in the November 1961 issue of the American Journal on Mental Deficiency.

His present research project supported by the Illinois State Department of Mental Health is designed to develop, among other things, a "scientific pedagogy" for the diagnosis and remediation of children with psycholinguistic disabilities. His study does not appear to be amenable to traditional experimental design, therefore, he is applying experimental approaches to single cases. This approach has been described by M. B. Shapiro of the Maudsley Hospital in London. Dr. Kirk's preliminary results of a longitudinal case study approach appear to show positive gains as described in his Progress Report to the Illinois State Department of Mental Health, March 1, 1962.

Findings from this study may well revolutionize the educational program for many educable mentally retarded children.

Effectiveness of Special Classes

S. A. Kirk has summed up the problems of research in this area in the following manner: Studies of this type have not controlled the essential variables needed for adequate inferences. For example, the selection factor in the assignment of children to special or regular grades has not been controlled. The investigators have not been able to assign children to the two treatment groups randomly.

Second, children in the investigations have attended regular grades for a number of years before being assigned to special classes. In effect, the comparisons of the regular and special classes have been of children who remained in the regular grades versus children who have failed in the regular grades from two to five years, and then assigned to special classes. In addition, a large number of the children in this type of experiment have been in special classes for only one year.

Third, there has not been a precise definition of a special class, the curriculum, or the qualifications of special teachers. Organization, curriculum, teaching methods and the qualifications of teachers vary widely. The labeling of a group of retarded children as a class for administrative reasons or for receiving State subsidy does not necessarily assure its being a special class for experimental purposes.

He also questions the reliability and validity of the measuring instruments used in the comparative studies. He stated, "Until we obtain well controlled studies of a longitudinal nature, our opinions about the benefits or detriments of special classes will remain partly in the realm of conjecture."

Example 1 - Dr. Herbert Goldstein of the University of Illinois, in preliminary report of a four-year study, one that has overcome many of these problems of research design, shows that the educable mentally retarded who have been in special classes for only two years are considerably ahead in social adjustment and comparable in most of the academic areas when compared with their equals in regular classes. His method of investigation will offer a model for researchers to follow as they investigate this area in the future. Also, the impact the findings of this study may have on the total field of education, in providing special classes, may be one of the greatest "breakthroughs" in the area of the mentally retarded.

Example 2 - Drs. Charles Matthews and Paul Bowman through the Illinois State Department of Public Instruction, will initiate this summer a demonstration project, in the Quincy, Illinois Public Schools, dealing with an educational program for slow learners. The bases for the demonstration are some of their findings from their 10-year project. Their general objectives to be demonstrated are:

1. To meet the needs of the slow learner for vocational preparedness.
2. To retain the slow learning, socially alienated student in the school program, through the 12th year.
3. To provide opportunity for the guidance toward adequate personal and emotional development for the failure-prone student.
4. To articulate and facilitate the transition of the slow learning student between the elementary, junior high, and high school, the world of work, responsible citizenship and family living.

This is planned on the basis of a five-year study and at the end of four years all slow learners will be included in the demonstration. Evaluation will be an integral part of the procedure each year plus one year, i.e. the last year for complete evaluation.

Performance on Various Learning Tasks

Example 1 - In developing educational programs for mentally retarded children, great emphasis has been placed on motor tasks and rote memorization and little attention has been given to more complex mental processes such as the discovery of a principle. Available evidence appears to indicate that such an emphasis has oversimplified the abilities and limitations of mentally retarded children. An investigation by Drs. Cruickshank and Blake at Syracuse University concludes that the rate of learning of mentally handicapped children in three types of direct learning performance -- sensorimotor learning, rote learning, and the discovery of principle -- does not differ significantly from that of intellectually normal subjects with similar mental ages. It would appear that we are unnecessarily placing restrictions on the learning potential of the mentally retarded child by not taking advantage of the abilities he does possess in abstract reasoning and overemphasizing the abilities we assume he possesses in, for example, motor development.

Example 2 - Many individuals have assumed in the past that mentally retarded children do not have fears and become upset with failures and therefore have no worries. For example: "All he does is wash dishes, or dig ditches, or carry garbage, etc.; he doesn't have any real worries." Dr. Leslie Malpass, formerly of Southern Illinois University, has revealed in a study that this concept about the mentally retarded is not true. He found that the manifest anxieties (worries and fears) of mentally retarded children both in institutions and in special classes when compared with normal children are significantly higher. Recognition of the impact that worry and fear have on learning effectiveness in the classroom may well tend to foster a change in attitude toward the mentally retarded child by many teachers and in turn result in a higher level of accomplishment by the mentally retarded child.

Auto-Instructional Devices

Example 1 - In teaching the mentally retarded the question invariably arises as to what particular method or methods would tend to increase the rate at which mentally retarded children learn. Certain facets of this question are being studied by Dr. Lawrence Stolurow of the University of Illinois. He is employing an automatic teaching device in teaching mentally retarded children in the area of the language arts. From this study will come programming principles based on sound learning theory to be used in future teaching of the mentally retarded through the use of auto-instructional devices. This type of aid will permit the teacher to spend more individual time with her students.

Example 2 - Too frequently mentally retarded children leave the special class without the basic skills needed in reading and spelling for minimum self-maintenance in our society. There may be many causes such as: (1) Too many children in the special class; (2) Late entrance into the special class; (3) an inadequate teacher; and (4) too many poor habits before he was placed in the special class. Dr. Malpass, who is now at the University of South Florida, will provide information as to which of two different procedures involving auto-instructional devices is most effective in the teaching of reading and spelling to mentally retarded children. He will also compare these findings with the effectiveness of the conventional teaching of reading and spelling in the special class for the mentally retarded. The end product may well result, as mentioned in the previous study, in releasing the teacher for more individual time with her students which may be beneficial in assisting them to have a better foundation in the basic skills.

Speech and Hearing

Example 1 - Several investigations of hearing loss in mentally retarded populations have indicated incidence of loss among such children to be five to ten times greater than that found in a normal population. Strong evidence exists to suggest that a goodly portion of this loss is not due entirely to physical reasons but to factors such as inability to respond to conventional methods of testing hearing loss. Dr. Bernard Schlanger of West Virginia

University has developed a battery of hearing tests for mentally retarded children which will more nearly provide a valid measure of "true" hearing loss.

Example 2 - Concern with the careless designation of mental retardation as a cause of delayed speech led Dr. Nancy Wood of Western Reserve University to study over 1,000 children with delayed speech. After a thorough analysis of records and re-examinations were administered, it was revealed that approximately nine percent had been mis-diagnosed as mentally retarded. A new method was devised to improve the technique of determining the cause of delayed speech. Based on her findings, a recommendation was made that a long term evaluation of the child be used in conjunction with the therapeutic setting when serving children with delayed speech in that the therapeutic setting may tend to reinforce an erroneous diagnosis of mental retardation.

Physical Coordination and Development

Example 1 - The old adage that an individual who is not good at "book learning" is the one who is good with his hands has been refuted by Drs. Francis and Rarick of the University of Wisconsin. They found that the motor retardation of the educable retarded child is greater than had been previously supposed. Their motor abilities are organized in much the same way as normal children and their development of these abilities is similar in growth pattern to normal children but at a lower level. These factors suggest that educable mentally retarded children may profit by the same kind of motor experiences as normal children although much more patience will be required in setting the stage for learning. Implications are many for this study but probably the most important is that a well-planned program of physical education should assume an important place in the educational programs for the mentally retarded.

Example 2 - Dr. Malpass of Southern Florida University compared the motor proficiency of institutionalized and special class educable mentally retarded with normal children. His findings were comparable to those of Drs. Francis and Rarick. He also found, however, that the motor proficiency of institutionalized and special class educable mentally retarded were comparable. This latter fact tends to negate the assumption that institutionalization, as it relates to motor proficiency, does not stultify the development of the educable mentally retarded child at least when compared with his non-institutionalized equal.

Although the field of mental retardation has received a considerable amount of attention and many researchers have put their efforts into studies involving many facets of the problem, it is almost self-evident that the area has just been "scratched" in relation to the facts. It appears to me, those who wish to set up priorities for research in the field of mental retardation are assisting primarily because they are drawing attention to the need. However, when priorities are used as a blueprint for research in an area it can be stultifying and in turn the efforts of the individual creativeness of the researcher may be hindered.

Happily we have moved beyond the point in this field for the need in calling conferences and meeting on what research is needed. We now must have new ideas, methods, techniques, and approaches pertaining to research in the field. We ought to be aware of what has been done, where the blind alleys are and avoid them in our new approaches.

If someone were to ask me, what is the basic need in the field of mental retardation? I would respond by saying, "quantity research of high quality involving studies of depth, scope, and a commitment to longitudinal studies."

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IMPRESSIONS OF A STUDENT TEACHER

Charlotte H. Cook

I have been asked to speak to you as a student teacher, and to share with you a few beginner's impressions of teacher, child and school. As a novice I am grateful to be both student and teacher, for I find that these two aspects of my training complement one another. Teaching challenges me to test in practice the value of my theoretical studies; it dispels the restlessness and the sense of confinement which I felt in my undergraduate ivory tower. Conversely, my courses offer bulwarks against discouragement and dissatisfaction with the school; they furnish resources for a comeback when I hear a teacher protest that every day she spends in the school system is that much more of an insult to her dignity and her intelligence. Most of all, I learn that people *are* concerned with the imperfections, action *is* being taken; constructive research and planning *are* in progress.

As I work alongside my skilled cooperating teacher, I sense a great distance between us. Is the measure of this distance simply "experience?" Do I decrease the mileage as I increase *my* skill? Only a little, I think. What, then, are the other milestones between me and the veteran teacher? First of all, I think our purposes in the classroom are different: hers is to educate, mine is to reacquaint myself with the life of children: I concentrate on sharpening my perception of each child in all aspects, because I want to cull from my observations the full impact of what it is to be a child, particularly a child in school.

My cooperating teacher is already well attuned to children; she is truly able to teach them. She has conceived and built a framework within which all classroom give and take occurs: its foundation is mutual respect, forged from confidence in her authority. I find that I cannot yet fit into this structure, although I believe it requisite to fine teaching. I am not yet sure how to command respect; I feel unworthy of authority. Lack of these essentials leaves me unable to resist overstepping the bounds observed by the master teacher. My relationships with pupils are more informal, colored with overtones of friend and helper: I do not provide an adult model with whom the children can identify; instead, *I* try to identify with *them*. My mission is to learn from the children about themselves; my method has been to meet them as equals. In so doing, I am serving *my* purpose, but am not helping *them* to learn from *me*, except incidentally. They are *my* laboratory; I am not *their* resource person. As I try to articulate these notions, I again call upon the concept of distance: authority requires the maintenance of considerable distance; when I cultivate informal relationships, I deliberately narrow the distance between the children and me.

So far, I have touched upon impressions gleaned from participation in the classroom only, neglecting my views of the school as a whole. The latter, unfortunately, are even more tentative, since my contact with other aspects of the institution has been limited. My impressions have been distilled mainly from attitudes and comments of the school staff. To my more informed colleagues I owe my growing awareness of the school as a distinct subculture, though I am still an alien.

Most apparent to me, and to my professional friends, is my hypersensitivity to symptoms of social and emotional conflict and my ignorance of the concept of maladjustment as it is defined by the school. I hear about Fred, for instance, a bright child, in the first class of his grade. He respects his teacher, and maintains his equilibrium in her presence, although he makes little academic progress. But in the halls, and on the playground, he is constantly "in trouble": he beats up other children, affirming that this is how he is treated at home. Hearing this tale, I exclaim, "This child needs help! Has the guidance counselor looked into his difficulties?" I draw, in response, a benevolent smile, and the counter-questions: Has he tried to destroy school property? No. Has he seriously hurt another child? No. Is he acutely disruptive? Is his teacher unable to control him? No. There are dozens of children of whom we must answer "yes" to all of the above queries; how, then, can we expect the overburdened guidance counselor to be concerned about Fred? I am told that I am too idealistic, which means, I think, too naive. When I rejoin that perhaps they are too pessimistic, I am corrected: they are simply realistic.

Perhaps we are both right. I know that I must become more reconciled to the realities, but I wonder if the real can exist apart from the ideal without succumbing to stagnation.

In sum, where do I stand as a student teacher? This jumble of thoughts, which I have tried to put into words for you, and for myself defies summation. It remains, quite obviously, a jumble. My judgments are intuitive, my ideas are half-formed. I cannot apologize, because this very quality of vagueness, of fluidity, expresses most truthfully the nature of my impressions as an initiate in a vital and demanding profession.

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THE CULTURALLY DISADVANTAGED: EDUCATIONAL IMPLICATIONS OF CERTAIN SOCIAL-CULTURAL PHENOMENA

Delmo Della-Dora

The following material represents the viewpoint of one person looking at the educational consequences of some social-cultural differences found in our present society. Three aspects of the problem which will be discussed are:

a) Current social-cultural forces which interact with the functions assigned to public schools
b) Effects of these forces upon the teaching-learning process
c) Direction which schools might take to solve the education problems which arise from social-cultural differences.

Current Social-Cultural Forces of Importance to Schools

Newspapers, television, and magazines have been giving a great deal of attention recently to the plight of the large cities. Among the problems cited are (a) exodus of white middle-class families to the suburbs, (b) large number of lower-income families in which there is no father or an unstable family tie, (c) a rapid influx of lower-class socio-economic groups into the central city, particularly into blighted or marginal residential neighborhoods, (d) a high rate of unemployment among adults, and consequent need for massive social welfare assistance, (e) serious lack of employment opportunities for both high school graduates and non-graduates ("drop-outs"), (f) an apparent increase in the incidence of delinquency and crime, and (g) influx of a large mass of lower-income families raised in rural areas with relatively little opportunity for formal education.

The largest urban centers are developing a pattern in which the lower socio-economic group is composed of younger minority-group adults with school-age children who live in the oldest and middle-age neighborhoods. The middle-class white citizens are older, live in newer homes and either have older children or no children at home. The city is surrounded by segregated white, middle-class suburbs. The combination of increased social welfare costs and reduced property valuation creates a severe financial problem which the cities alone have not been able to solve and which, properly, is not theirs alone to solve. The problems of the cities are really the problems of the state and the nation in terms of their creation. However, relatively little attention is given to city problems by state governments and, until recently, no major consideration was given by the federal government. The relative indifference of state government is better understood when we examine the composition of state legislatures. Here we find that rural representation in both houses of the state legislature is disproportionately great in approximately 35 of the 50 states. In Michigan, for example, fifty percent of the total state popultion is located in the three metropolitan counties of Wayne (including Detroit), Oakland, and Macomb. Their actual representation in the state legislature consists of nine senators in a senate of 34 members and 47 representatives in a house of 110 members.

Another characteristic of the city, particularly the inner city, is rapidy changing neighborhoods. In Detroit and Chicago, for example, the rural southern white families seem to migrate and emigrate with fluctuations in the employment market, while Negroes apparently remain in the city but change locations frequently. The remaining middle-class and upper-middle class white families keep moving away from the approaching tide of lower-class movement.

In sum the picture is one of rapid change in population characteristics, involving groups which differ radically in social-cultural makeup and which do not interact very effectively. As indicated, this goes on within a framework in which increasing need for social welfare assistance is accompanied by a decreasing supply of tax revenue from presently available sources.

Effects of Social-Cultural Differences on the School

There is a high rate of illness and nutritional deficiency among the lower economic group families. They are ignorant of good health practices and/or financially unable to carry them out. Individual pupils who are hungry, improperly fed, or ill will obviously have reduced efficiency as learners.

Many children lack interest in school and show evidence of low achievement. Apathy as well as emotional and social maladjustment among parents, lack of books or other learning media, and little opportunity for travel all contribute to an educationally sterile home environment.

Student self concept and level of aspiration are generally low in relation to typical school-centered activities. Evidence of this is found in the study of a large city by Patricia Sexton (1961), in which she reports failure rates as being six times as high among elementary school children whose families earn $3000 or less annually compared to families earning $9000 or more. She also indicates that 37 children per 10,000 were identified as very serious behavior problems in the case of lowest income families while none are recorded from the highest income group. Another vital statistic is the drop-out rate, which is five times higher among students from lowest income families compared to those from highest income families.

Pupil-Pupil Relationships

Social class differences are not as great among the elementary school children of a large city as they are among high school students. This is true because the attendance areas of elementary schools are smaller and, therefore, more homogeneous in character. However, even high schools in the large city are much less representative of the total community than the high school for a given smaller community. Sexton reports that among the seventeen high schools in one large city, median income of families was $5,000-6,000 for five schools, $6,000-7,000 for three schools, $7,000-8,000 for four schools, $8,000-9,000 for four schools, and over $9,000 for the remaining school. Social class differences exist within schools and among schools, compounded by racial differences which are pervasive enough to be considered caste differences.

The testimony brought into evidence before the U. S. Supreme Court favoring school desegregation showed clearly that "separate" cannot be "equal" for education in a democratic society. The segregation which occurs in large cities is in many ways as segregated in terms of social class and caste characteristics as many of the deliberately segregated schools in this country. Students do not have an opportunity to learn and value other students of dissimilar background in this kind of situation.

It would be naive to assume that mere physical integration will automatically bring about social integration or otherwise result in an environment which fosters democratic living more effectively. The data from Elmtown's Youth (Hollingshead, 1949) and other studies show that interaction among students takes place primarily along social class lines. As Hollingshead concludes (pp. 444-45) ".... children's behavior patterns are established primarily by their early experiences in the family and secondarily in the neighborhood ... similar experiences mold children into similar social types strongly associated with class ... As he participates in successive social situations, he learns to act in certain ways, to regard himself as a valued member of the group or as an unwanted person ... By the time he reaches adolescence his personality is formed. Also, he has developed conceptions of (1) himself; (2) the social structure; (3) his place in it along with appropriate roles and statuses; (4) forms of behavior approved and disapproved; and (5) means of doing what he desires even though it involves the violation of laws and mores."

Thus in both the small town high school and in the large city high school the social life in the school is affected materially by social life outside of schools. It determines school friendship groups and also affects learning goals and learning outcomes. Van Egmond (1960), for example, has found in a study of second and fifth grade students that difficulties in peer relations, being disliked by one's peers or being of low status, disrupt pupil motivation and the ability to learn from adults.

Teacher-Pupil Relationships

Teachers generally come from upper-lower or lower-middle class families. They are generally characterized by sociologists as being upward-mobile. A significant number identify strongly with middle class or upper class values. The distribution of marks, praise or blame, selection for special ability classes, determination of promotion or failure, of punishment meted out for infraction of rules, and other kinds of teacher-pupil interaction in school are, at times, affected by social class background of the students. These conclusions are supported by the work of Sexton and Hollingshead and by a number of less comprehensive studies.

For the big city teacher who favors the behavior and values of children from middle-class and upper-class families, assignment to a low-income neighborhood school may adversely affect treatment of students. There has been a time in the history of each big city's schools when teachers placed in such neighborhoods were either the least competent or the least experienced teachers in the school system. The impact of this process of teacher assignment is readily apparent.

School-Community Relationships

Parents of students in low-income neighborhoods do not feel as close to schools as do parents in higher income groups. Their own educational status, the different social class represented by teachers, less self-respect, a low incidence of familial stability, and a high incidence of change in home location all contribute to the development of this feeling.

The support ordinarily given to school people through the P. T. A., visits to schools, supportive comments, presence of books at home, and interest in school activities is generally low. School people do not have much opportunity to feel the sense of community through parents or their children, and since they rarely actually live in the community there is very little available to facilitate communication. The barriers to understanding and cooperative action are extremely high. Learning on the part of students, parents, or teachers, is inhibited in comparison to the situation in neighborhoods or communities of higher economic levels.

Implications for the School

The problem described above, and their impact on schools are perplexing for a variety of reasons. A basic question relates to the proper role of the school in our democratic society. What criteria should guide us in determining what the school should try to do, much less what it can do? The traditional role of schools is conceived to be that of transmitting the culture, the status quo. As such it is a conservator of the existing social system and all the consequences which ensue. On the other hand, the learning problems with which the school must deal do not exist in isolation. Joseph K. Hart, (Michigan Department of Public Education, 1960, pp. 2-3.) American educator and philosopher, put forth this viewpoint: "The democratic problem in education is not primarily a problem of training children; it is a problem of making a community in which children cannot help growing up to be democratic, intelligent, disciplined to freedom, reverent to the goods of life, eager to share in the tasks of the age. A school cannot produce this result; nothing but a community can do so."

Schools generally, and big city schools in particular, must increasingly accept this community school concept if they are to provide adequate and equal educational opportunities for all. The conclusion seems inevitable. The problems of living in an urban society cannot be solved exclusively within the confines of an individual home, nor can the schools carry out their responsibility without the active cooperation of other persons and agencies which affect learning attributes. To say that we should "teach the whole child" is a tautology. We have no choice; there is no other way to teach. The so-called "intellect" refuses to be set aside from affective dimensions. Categories of "emotional" "social" and "intellectual" are man-made constructs which are useful for some purposes of analysis but stand in the way if we are examining the total educational goals of public schools in a free society. If we can accept the philosophy implied in the foregoing, the nature of our solutions might be in these directions:

Increasing coordinated efforts among schools, local government, and other social and civic agencies. Problems of health, housing, economic well-being, community interaction, and others of importance to learning are problems held in common by many agencies. Schools should initiate action to see that the problems are attacked in a coordinated fashion if no other agency has already done so. In practive this means calling into being some kind of school-community planning group. Each high school could serve as the locus of activity. If not, whatever can be identified as natural communities within the city should form the basis for action groups. The questions to which a community planning group should address itself are:

(a) What is each of us doing to help raise the level of living in this community?

(b) Where do we see an inappropriate or unnecessary duplication of effort?

(c) In what areas can we (and should we) work together?

(d) What do we know about total community needs and problems? Which of these are not being met adequately? What needs to be done? Who should do it now? Who can do it, in terms of financial and personal resources? What needs to be done to obtain the necessary resources? What are the short term solutions and the longer term solutions to these unmet needs and unresolved problems?

A coordinated effort to solve total community problems spearheaded by school people does not imply that the schools should undertake to perform additional societal tasks, not is it our intention to suggest that social agencies should take over functions of the individual or the family.

The schools may well ultimately perform a lesser number of social functions than many are attempting now as they try to deal adequately with the impact of social class differences on the teaching-learning process. Local government should probably take on most of whatever additional functions are seen as necessary, including the coordinating function just described. A major criterion for examining solutions to societal problems should involve asking "How can we stimulate and assist individuals and families to help themselves?" The ultimate goal should be to foster self-understanding and self-direction - both for individuals and the basic small unit of society, the family. This should remain as a long-term goal even if the situation warrants something quite different on a short-term basis. People who need help cannot always wait for ultimate or ideal conceptions. Hunger, malnutrition, preparation for a job need to be dealt with when the problems appear. However, because of lack of vision or because we become enmeshed in the creation of a new, inflexible bureaucracy, it is often too easy to retain short-term solutions which infringe on the rights and responsibilities of individuals.

Schools need to carry out a self-study of the impact of social-class differences on students and teachers, school-by-school. The kinds of analyses carried on by Hollingshead and Sexton are examples of a type vital to school operation. How these influences operate in the lives of particular youngsters and teachers needs to be examined by the teachers and administrators who are to evolve solutions. This analysis is necessary both for the school itself and as a prelude to effective cooperative efforts with other social agencies.

Direct teaching aimed at changing attitudes and self concepts should be made available to students and parents. What people think of themselves and others determines how they act. Low level of aspiration and low self-esteem lead to lower than necessary achievement in all areas of living. There is some evidence to suggest that individuals and groups can be assisted in developing more favorable attitudes by means of direct teaching, which it is within the ability of most teachers to do or learn to do. The work of Ellis and Harper (1961) with adults, and exploration of attitudinal change among elementary school children by staff members of the Wayne County Board of Education, offer some evidence to support this contention.

There are other avenues which might be profitably explored by schools in dealing with the issues identified in this presentation. In the interest of brevity they will simply be mentioned without elaboration at this point:

(a) Help expand and diffuse leadership throughout the community.

(b) Give leadership, when appropriate, to constructive community projects.

(c) Practice and promote democratic procedures throughout all phases of school operation.

(d) Use community resources in the instructional program.

(e) Involve all persons affected by the school operation with planning and appraising.

(f) Develop a school program which is genuinely life-centered as a social institution.

Summary

The problems associated with cultural deprivation are problems of class and caste differences. The situation is not unique to big cities but is more apparent and its effects more dramatic in this setting. Schools are involved and affected because these differences radically limit equality of educational opportunity. The problems must be solved not because we are in military competition with Russia and other totalitarian states, nor because we are engaged in scientific and economic competition with all other countries, but because we are citizens of a society in which all persons should be given equal right to develop their individual talents to the fullest.

The most recent publication of the Educational Policies Commission, "Education and the Disadvantaged American," (NEA Journal, April, 1962) summarizes proposed solutions to the problem in the following manner:

Special Characteristics of the School Program. The successful school program attacks the problem of the culturally handicapped on three fronts, simultaneously. It demonstrates to pupils a close relationship between school and life; it includes remedial services necessary for academic progress; and it arouses aspirations which can alter constructively the courses of young lives.

Special Characteristics of the School Staff. The specialized and administrative personnel, like the teachers, must have preparation designed to promote understanding of the children and parents with whom they will deal. In addition they can learn from each other --- The principal should encourage this sharing and should foster the willingness of teachers to consult with specialists on the staff.

Special Characteristics of the Administrator. In disadvantaged communities, especially, the school should make of itself a neighborhood institution, for its success depends to a considerable degree on the parents' attitudes and the staff's knowledge of family circumstances --- Special administrative efforts are therefore required to sustain morale - rewarding good performance and encouraging experimentation.

It is evident that the problems of providing equal and adequate educational opportunity for the culturally deprived will require additional school personnel and additional school services. If we measure this cost against the actual cost of delinquency, crime, and underproductivity it will be a bargain in terms of dollars. If we measure the cost in terms of unfulfilled human desires, underdeveloped capabilities, and unexplored potential for improving the quality of democratic living - any amount of money needed to do the job will be well worth the expenditure.

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ASSESSMENT OF EDUCATION OF THE DEAF AND HARD-OF-HEARING THROUGH RELATIONSHIPS WITH COMMUNITY AGENCIES

Harriett J. Dierks

I would like to tell you several stories to illustrate how the resources of a community have been tapped for the interests and needs of deaf and hard-of-hearing children.

Mary Lou, who is deaf, is the second child of a family of five children. The mother brought her to our Center when she was two and a half. Her legs were so crippled that she had difficulty in walking and sitting. The mother said the child was born that way and that she herself had some difficulty holding one foot straight. The financial interview revealed that this family was eligible for aid under the Tennessee Department of Public Health, Division of Crippled Children Service. Therefore,the cost of the pre-school nursery program would be of no cost to them. The interview with the Crippled Children's Agency was arranged by our office. ---- When we learned some of the details of Mary Lou's physical problem, we again referred her to the local office of the State Department of Public Health, which provides medical and surgical service to the orthopedically handicapped and other crippling diseases. Mary Lou was fitted for braces, given physical therapy and is presently under the care of the local physicians who are under contract to the State Organization. Mary Lou recently received a hearing aid from this same organization to replace the aid loaned to her by our Center at the beginning of her pre-school deaf training.

About a year ago, we had reason to believe that Mary Lou's father and mother needed counseling beyond that available at our Center. They had not really accepted Mary Lou's deafness and there was friction concerning how she should be handled at home -- behavior-wise. The problem had become serious and was threatening the well-being of the entire family. They were referred to the local Mental Health Center, an agency of the local city, county and state department of mental health.

I would like to take the time here to go into the groundwork necessary to good relationships with the various agencies available in a community. First, each agency needs to know the function of the other, its purposes and limitations. This information is not available in a telephone directory, one must come in contact with the personnel of each agency.

To educate the members of the staff of the Memphis Speech and Hearing Center to the exact function of the State and Community Agencies, and to acquaint other agencies of our services, our director has set up a work-shop period of two or three days, usually during the first week of September. During that time, a program of speakers from various agencies is arranged, alloting time for a specific description, and a question period, by each agency representative. While all of these agencies are not used directly in the interests of deaf and hard-of-hearing children, they are available if a need should arise.

Under child guidance organizations, we heard a psychiatrist from the City Psychiatric Hospital and a psychologist from the Mental Health Center. Concerning child care, complaints and problems, a representative from the Children's Bureau, which is a community fund sponsored program offering casework service to families who need and want help in planning care for their children. A similar organization, Family Service, is helpful to families faced with problems with which they need guidance. From the local board of education, the director of special education described the day school set-up and its procedures. A representative from the State Department of Education, Division of Vocational Rehabilitation, told us of vocational training programs they have arranged for young as well as older deaf persons.

By familiarizing ourselves with the scope of these agencies, we can better serve the deaf and hard-of-hearing children in our area. By discussing possible problems with personnel of city, county and state, as well as private agencies, we are better able to cope with the real problems on the fringes of jurisdiction, those that don't quite fit into "this" or "that" category.

Reference to the residential school brings to mind the direct action taken by the Superintendent of the Tennessee State School for the Deaf, Dr. Lloyd Graunke. During the early part of his first year as superintendent, he invited the directors and department heads of the seven hearing and speech centers in the state to come to Knoxville as guests of the State to discuss the education of deaf children and related problems in connection with admission of children to the State School. Representatives of state agencies were also invited to provide the group with a clear picture of available services and how they could be procured at the location of each center.

Also, the Speech and Hearing Service of the State of Tennessee, in cooperation with the Tennessee Hearing and Speech Foundation and the Tennessee School for the Deaf has sponsored, for the past two years, an Institute for Parents of Pre-school Deaf Children the first week in June at the Tennessee School for the Deaf in Knoxville. This institute is aimed at parents in rural areas whose deaf children do not have access to the training facilities of a speech and hearing center. During the week, parents are given instructions in helping the deaf child acquire speech and language. Nursery sessions are held each morning. In the afternoons and evenings the parents hear lectures and make home training materials. Each deaf child in attendance is given a complete pediatric, otological, psychological and audiological evaluation, and his parents have the opportunity to receive guidance from the entire staff of the institute which is in residence for the week. Speech and Hearing Service Regional Directors continue to follow up with regular home visits to these families during the year.

It is not my purpose to balance the values of a residential school versus a day school. However, to show how the coordinated efforts of several agencies helped to alleviate some serious problems within a family, I should like to tell you about the Adams. It all began with the grandmother telephoning the Speech and Hearing Center to see how she could go about getting her son's two deaf boys into a pre-school program. Her son had been given a hardship discharge from the army and was coming home from Guam with his wife, young daughter and the two boys so that they could get the right kind of training. The daughter was normal, about 10 years old. The four year old was tested and placed in the pre-school program for observation. He was alternately sleepy and attentive. He rolled his eyes a great deal and behaved like a baby part of the time. He made some progress as time passed by but the odd behavior and the eye-rolling remained. The younger boy was tested by GSR when he was 2 and the results showed hearing within the normal range. We felt the second child was below normal in intelligence and we referred the family to the Child Development Clinic which receives its main support from the United States Children's Bureau.

Both boys were evaluated there and guidance provided for the family. Jimmy, the older boy who was deaf, was found to have intelligence well within normal levels. John, the younger child, was found to be far down on the scale mentally and application was made for him to be admitted to the state home for the mentally retarded.

The waiting list is long and in the meantime this father and mother are being counseled and guided by the personnel of the Child Development Clinic.

A representative of our Center was asked to be present at the staffing of the boys at the other Clinic. Since John could not be taken out of the family home until there was a place for him, it was considered best that Jimmy should be sent to a residential school. His family was given a long time to think it over and agreed to his going. The eye-rolling has stopped, his mother told me, and he is getting along fine and was eager to go back after the Christmas vacation. She also told me that John is under sedation prescribed by the pediatrician of the Child Development Clinic and is cared for part of the day at the Duration Club, a pre-school for mentally retarded. Home visits by the social workers from the Child Development Clinic are helping the family through this difficult time. Their income was within that allowed for aid by the Crippled Children's Agency so that these extensive services are possible for this family.

Summary

It is fortunate that many little deaf boys and girls can remain at home with their families and attend special classes within the public schools. Qualified teachers, an interested parents' group and a sound school system to back them up is ideal. It is the obligation of these teachers, the parents and the school principal and department of special education, to educate the public. That might be a trite phrase, but is it really being taken seriously? Everyone who has worked with the deaf or hard-of-hearing, (if he stays with it over the years as I have) has been asked if he knows the sign language or if he knows Braille! The public needs to know more about it.

Community agencies are made up of local people each knowing the functions of his own organization and perhaps that of one or two or several others.

Do ask the heads of these organizations to come or send a qualified person to speak to a parents' group. Ask him to talk about what his organization does. He in turn will learn something about yours.

Not long ago, I was told of a mothers' club affiliated with the Alexander Graham Bell Association which had incorporated into its group for special semi-annual meetings, the president of the local pediatric association, a newspaper editor, three ministers, a representative from every agency in town connected with services for children, and the president of the local hearing aid dealers association.

Perhaps there is an inter-agency group in your community where you can take problems. Such a group has recently been organized in Memphis. It is composed of representatives from the Speech and Hearing Center, Special Education (Board of Education), the Mental Health Center, the Child Development Clinic, Les Passces, which is an out-patient treatment center for neuromuscular disabilities, and the United Cerebral Palsy Association.

The purpose of this group is to learn what the other does and make use of the facilities offered. They now have adopted an inter-agency referral form which will minimize duplications of many examinations required by each agency.

The agencies and clubs which have been named, or their counter-parts, exist in many areas of our country. Often the existence and purpose of such agencies are not known to all, but I believe I am perfectly safe in saying that a Speech and Hearing Center would know of them and would offer its cooperation in directing inquiries to the right direction.

It is the duty of those of us who work with deaf and hard-of-hearing children and their parents to acquaint the community with the total plan for the education of these children without over-emotionalism; then to aspire and provide for them the opportunity to lead happy and satisfying lives in a world made up of both deaf and hearing people.

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EMOTIONAL DISTURBANCE IN DEAF CHILDREN

Patricia Edelen

In our counseling at Gallaudet, we have seen a considerable number of emotionally disturbed children between the ages of 6 and 17 with a preponderance at age 8 or 9. It is possible that the reason we see more at 8 or 9 years is due to the discovery of the problem by teachers or the unwillingness of teachers and parents to tolerate these problems in a child of 8 years. We find it desirable to see both the child and his parents as difficulties with their child often causes friction between the parents. This creates a situation which accentuates the parent-child problems.

Hearing parents are often frustrated, guilty, rejecting, and without communication with their deaf child. Therefore, they fail to understand him. The child senses these feelings and reacts to them with tantrums typical of a pre-school age child as he is unable to express this rejection and non-acceptance in another manner. The child, too, is frustrated by his lack of ability to communicate. His only form of communication with his parents is on a primitive, non-verbal, physical level. It is reasonable to assume that the bright child is more likely to be frustrated in such a situation than the dull child. These tantrums give rise to a vicious cycle: the more he displays socially unacceptable behavior, the more he is rejected.

Often these tantrums are a deaf child's bid for affection and attention. Unfortunately, the only time some of them receive any attention is when they misbehave, either at home or school, so that this behavior pattern becomes reinforced; i.e., the child misbehaves because he has learned that this is one sure method to get attention. Any attention, even though it is not pleasant, is better than none at all. An example of this is a 9 year old client who often hits a classmate in order to attract the teacher's attention. He knows he will be reprimanded, but this is in itself attention.

Occasionally, these parents are reluctant to set limits on the behavior of their deaf child (as often happens with other handicapped children) and the child's behavior gets out of control in his search for these non-existent limits. For example, a boy of 17 years was referred to the Counseling Center because he was physically attacking his father. His attacks became increasingly vicious but limits were never set. He had never been taught that he should not attack his father.

The limitations of inadequate communication make accurate diagnosis of emotional problems extremely difficult. Although we know that the child is happy, sad, or angry, we don't always know what caused this outburst of emotion: is he reacting to a present or a past feeling? Failure to understand what has caused the emotion is especially limiting in a child who exhibits many bizarre, schizophrenic-like symptoms. If such a child suddenly starts giggling, it is almost impossible to know if: something seemed funny to him at that moment; something reminded him of a funny incident that happened in the past (whether yesterday or last year); or whether he is off in his own little world and exhibiting serious symptomotology.

Obviously with our child clients who have very little language of any kind, therapy is almost entirely non-verbal. Art and play materials are utilized to a considerable extent. We have found that art materials are preferred and toys are seldom used. Perhaps the deaf child's lack of experiences partially accounts for this. A hearing child often is able to recognize the sequence of events which led to a parental reaction. He often reenacts these experiences both in his own play and in therapy. Hence, the hearing child will reprimand and punish a doll when the same events have previously happened to him. For the most part, the deaf child misses the sequence of events and picks up only the emotion. He can spank the doll but is unable to recreate the events leading to the punishment.

Play therapy is in an accepting atmosphere with communications on his terms, often manual (i.e. signs and finger spelling). Limits are set and the child learns that although the rules are few, they are not to be violated (i.e. he is not permitted to throw water in the room). When a rule is broken, he is told that "that is not allowed" in a firm, non-threatening, and accepting manner. The child accepts this and rarely breaks the same rule twice. The goals of therapy are to help the child communicate, understand, control his emotions and redirect his aggression into socially acceptable channels.

Although we have been in operation a relatively short time, and I do not want to draw conclusions from limited data, the majority of the disturbed children we have seen have come from hearing parents. This makes us suspect that deaf people with severe emotional problems are rarely from deaf families. Certainly, communication plays a large part in the total acceptance of a child and communication is likely to be less adequate between hearing parents and deaf children than between deaf parents and their deaf children. It seems to me that if hearing parents could accept their deaf child as a person, the result would be a lower incidence of emotionally disturbed children.

The mode of communication is not important -- the crucial point is that the child have EFFECTIVE communication with his parents. Every child needs to feel part of the family; to know what happened today and what will happen tomorrow; to participate in the dinner conversation; and to feel free to talk to his family about even the most minor details of his life.

Several critical needs emerge in this area: (1) more parent education and guidance programs; (2) research into the significance of symptoms of emotional disturbance among deaf children other than the most obvious ones; (3) research into the methods of personality assessment of deaf children; and (4) guidance programs in the schools so that the teachers of the deaf may become more effective in recognizing and dealing with disturbed deaf children.

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PROGRAMMED LEARNING OF ELEMENTARY READING

D. G. Ellson

The general purpose of our research program is to develop techniques for teaching elementary reading that can be automated. Most of the experimental work will be carried out with retarded children but the applicability of the techniques is not necessarily limited to them. In order to maintain the flexibility of program and situation necessary for research purposes, the teaching programs tested so far have been only superficially automated, but with one major exception they consist in components which can be fully automated once optimum program sequences have been determined. It is our opinion that the construction of teaching machines with sufficient flexibility for research purposes would be a misdirection of effort. All of our research has been carried out with "pseudo-teaching-machines" -- in effect, false fronts which look like machines but are manipulated from behind by human operators. Once optimum programs are determined we shall concern ourselves with the problem of automating them. Presumably this part of the task can be carried out effectively by engineers.

The exception mentioned above is the automation of listening. One necessary component of a program to teach reading at the elementary level is the identification of correct oral responses made by the learner, something which machines can now do ineffectively, if at all. It is our belief, however, that the necessary discriminations can be performed by people with considerably less training than a professional teacher. A part of our research program is therefore aimed at the development of techniques which isolate and simplify this component so that it may be carried out by tutors only slightly more advanced in reading ability than the learner.

We have not restricted this progress report to finished formal experiments. At this early stage of investigation we are not limited to effects manifested in differences that can be verified only by sensitive statistical tests. We report results obtained with a few subjects when they are clear and we point out certain questionable effects that would have practical significance if later substantiated.

Experiment I. Acquisition of sight-reading vocabulary by retarded children using pictures as prompt-stimuli.

Subjects were 38 retardates, residents of Ft. Wayne State School, CA mean 16, range 11 to 40; IQ mean 54, range 25 to 74. These were distributed randomly to experimental and control groups. Apparatus consisted of a wooden screen separating experimenter and subject, with an opening in which a word or a word and a picture could be exposed. The learning material consisted in 82 words selected from the 1500-word "Reading Vocabulary for the Primary Grades" prepared by Gates, each word being paired with a picture which the children named with that word only. A 150-word general reading vocabulary test was constructed by selecting every tenth word from the Gates list arranged in order of frequency, with words in the learning material excluded. This test was administered before and after a five-trial learning session. The learning program, preceded by appropriate instructions, was given only to the experimental group.

The learning program: ("Picture program")

Step 1. Show word. If oral response is correct, reinforce (by flashing a light) and proceed to next word, step 1. If incorrect, proceed to step 2.
Step 2. Show word and picture. If oral response is correct, proceed to step 3. If incorrect, tutor names picture correctly, then proceeds to step 3.
Step 3. Remove picture, leaving word visible. If oral response is correct, reinforce and proceed to next word, step 1. If incorrect, tutor names word correctly, learner names word, then proceeds to next word, step 1.

This program was utilized for all words in the learning material on learning trials 1 and 5. On learning trials 2, 3 and 4 it was followed only for words not known, i.e., not correctly read in step 1 on the previous trial. Trial 6, similar to trials 1 and 5, was given one month after trial 5 as a retention test.

The mean number of words read correctly by the experimental group in step 1 in trials 1, 5 and 6 are shown in Table I. The results shown in this table indicate that the picture program is a feasible way in increasing reading vocabulary in retarded children. The mean time required for the learning shown was 36.7 minutes, giving a mean learning rate of approximately 19 words per hour. It should be emphasized that this result was obtained under laboratory conditions that almost certainly cannot be duplicated in practice. Retention is not remarkable.

Table I

Trial 1	20.9
Trial 5	32.7
Gain	11.8*
Trial 6	27.7
Loss	5.0 (43%)

*p .01

Pre- and post-test scores (general reading vocabulary test) for experimental and control groups are shown in Table II.

Table II

	Experimental Group	Control Group
Pretest	17.0	17.9
Post-test	24.1	20.7
Gain	7.1	2.8
p_{gain}	.05	.20
$p_{diff.}$	.20	

The results in Table II are significant in that they show improvement in a performance not practiced, a "therapeutic" effect. They also suggest that some of the "learning" shown in Table I may have been re-learning or latent learning (all of the subjects had some prior school background). These suggestions are being followed up in other studies.

Experiment II. The use of retarded tutors.

Experiment II is an informal test of the feasibility of using retarded children as tutors. Two retarded children, residents of FWSS, were taught the picture program used in Experiment I without difficulty -- something less than two hours was required in each case. These tutors are characterized as follows: Tutor A: CA, 14; IQ, 71. Tutor B: CA, 17; IQ, 58.

Using a procedure similar to that in Experiment I, Tutor A taught one retarded child seven words; Tutor B taught four retarded children a mean of 28 words. The average rate of acquisition (23 words per hour) was slightly higher than that attained in Experiment I in which the teaching program was administered by professional personnel. Similar reservations apply: it is not likely that such rates can be maintained for long periods under non-laboratory teaching conditions.

Except for possible special purposes, we have since abandoned the picture program in Experiments I and II. It will be noted that the pictures are used as stimuli, not illustrations, and are effective only if the response to them is uniform (the picture of a robin cannot be used since it evokes at least two verbal responses with non-negligible frequency, e.g., "bird" and "robin"). Only about 20% of words in the Gates list of 1500 most frequent words can be pictured with sufficient non-ambiguity for our purposes, and there is some evidence (teachers' opinions) that the use of pictures in teaching these words increases the difficulty of teaching non-picturable words.

Experiment III. Extended test of a sentence program using verbal prompts

A "sentence-program" was developed and tested with three groups of children for eight sessions. This program utilized consecutive sentences in a story designed for primary readers, the material containing 165 different words. The "sentence-program" accompanied by appropriate illustrations, follows:

Sentence-Program, utilizing oral prompt-stimuli:

Step 1: Show sentence. If sentence is read orally correctly, tutor reinforces and proceeds to next sentence, step 1. If incorrect (error in reading any word) proceeds to step 2.

Step 2: Tutor reads sentence, then shows the words of that sentence in random order A and points to words one at a time. If each word is read correctly, tutor reinforces each word and proceeds to step 3. If any word is read incorrectly, tutor reads it to S, who repeats it, then proceeds to next word. After last word proceeds to step 3.

Step 3: Show sentence. If sentence is read orally correctly, tutor reinforces and proceeds to next sentence, step 1. If incorrect (error in any word) proceeds to step 4.

Step 4: Show sentence. Tutor reads sentence, then, leaving sentence visible, names words of that sentence one at a time in random order B, learner pointing as tutor reads. If all words pointed to correctly, proceeds to Step 5. If any word is not pointed out correctly, tutor points correctly and learner then points. After last word, proceeds to step 5.

Step 5: Show sentence. If sentence is read orally correctly, tutor reinforces and proceeds to next sentence, step 1. If incorrect (error in any word) tutor reads word and learner repeats. After last word proceed to next sentence, step 1.

This program was utilized in 8 half-hour sessions, two per week for four weeks followed one month later by a retention test. Three groups of 4 subjects each, (a) normal first-grade children, (b) slow learners in the first grade, and (c) retardates similar to those in Experiment I were taught with this program. Gains during learning and losses during the one-month retention period are shown in Table III.

Table III

Group	Gain	Retention
Normal	30.5	-1.8
Slow	20.0	-1.5
Retarded	19.5	-2.0

Mean rates of learning in this more realistic experiment were approximately 5 new words per hour for the retarded and slow groups and 7.5 for the normals. Performance would probably have been improved if the sessions had been shortened to 20 minutes. One-month retention is near 90% for all groups.

The initial rates of learning for all groups are similar. The curves for the normals are straight or curve upward, those for the retarded and slow groups show decreasing rates. Causes of the negative acceleration and possible remedies are major problems in our current research program. We have evidence that for some retarded children and slow readers the problem is motivational rather than organic and that it can be overcome by appropriate reinforcement techniques.

Transfer or "therapeutic" effects of the training indicated by a vocabulary test of words not included in the learning material was negligible (Table IV) except for one subject in the "slow" group who gained a total of 59 words between pretest and retention test. Since the test was a 10% sample of the Gates list this increase indicates a large gain in potential reading vocabulary performance.

Table IV

Group	Gain	Retention
Normal	3.8	+2.0
Slow	2.5	+11.3
Retarded	1.5	+0.5

Experiment IV. Comparison of classroom and programmed learning techniques

This experiment comprises the first half of Experiment V. Four groups of 16 retarded children were tested for (a) vocabulary learned and (b) comprehension before and after six half-hour teaching sessions distributed through 1-1/2 weeks. The conditions distinguishing the four groups follow:

Group	Condition
Pr.	Taught individually with the sentence program of Experiment IV.
Cl.	Taught the same material by standard classroom procedures in groups of 8.
Alt.	Taught in alternate sessions with program and classroom procedures.
Cont.	Control groups, given no training.

All groups were given pre- and post-tests consisting in a test of the reading vocabulary in the learning material and a test of comprehension involving questions concerning the meanings of new sentences constructed from words in the learning material.

Results expressed as gain in vocabulary and comprehension test scores are shown in Table V.

Table V

Group	Vocabulary	Comprehension
Pr.	32.9	.9
Cl.	18.1	1.5
Alt.	37.6	4.1
Cont.	6.6	1.3

For reading vocabulary gains, differences between the following pairs of groups were significant: Cont. vs. Pr., Cont. vs. Alt., Cl. vs. Alt. For comprehension gains no differences were significant.

Experiment V. Comparison of methods of combining classroom and program procedures.

This study extended Experiment IV for an additional six sessions, a total of four sessions per week for three weeks. Three methods of combining the program and classroom procedures were compared. The pretests are the same as in Experiment IV; the post-tests were given after the 12th session. Experimental conditions for the four groups were as follows:

Group	Condition
P-C	Six sessions taught with program followed by six sessions in the classroom.
C-P	Six sessions in the classroom followed by six sessions taught with program.
Alt.	Twelve sessions, alternating classroom and program procedure.
Cont.	Control groups given no training between tests.

Results expressed as gains in reading vocabulary and comprehension test scores are shown in Table VI.

Table VI

Group	Vocabulary	Comprehension
P-C	39.0	3.8
C-P	37.6	3.7
Alt.	57.2	6.6
Cont.	12.6	1.4

In vocabulary scores, all experimental groups gained significantly more than the control group but did not differ significantly from each other. In comprehension there were no significant differences between groups. Gains in vocabulary scores are statistically significant for all except Group Cont.; the difference in vocabulary gain between groups A and C-P is significant at the .05 level. Other differences are not statistically significant. The mean rate of acquiring new reading vocabulary by the alternation procedure was approximately 9 words per hour. Significant improvement in comprehension appears for the group trained under the alternation condition, but it is not significantly different from that of the control group. It may be noted that at the time of the final comprehension test the control group could read approximately 25% of the words in the material read, groups P-C and C-P approximately 33% and the alternation approximately 50%.

These experiments indicate the feasibility of teaching reading vocabulary to retarded and normal children by programmed learning techniques, that programmed teaching can be carried out by relatively untrained personnel, and suggest that programmed learning was most effective in combination with classroom teaching. We are now investigating the problem of maintaining the motivation of learners and tutors over longer training series than have been examined so far. Future research will be concerned with analytic reading at the word level (e.g., the phonetic method) and at the concept level (e.g. conventional subject-matter programming).

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HOW CAN PARENTS AND SPECIAL EDUCATORS BEST COOPERATE FOR THE EDUCATION OF EXCEPTIONAL CHILDREN?

Martin Essex

As we view our responsibilities for the preparation of the twenty-first century citizens, perhaps it is well to review some of the challenges that still confront us in mid-twentieth century America:

Thirty million Americans changing addresses every year ....

Small communities swallowed up by metropolitan complexes ....

Science shattering the bounds of time and space ....

Automation revolutionizing whole industries ....

Ideological college students revolutionizing whole nations ....

These are some of the forces that are altering our economic and political theories, upsetting our modes of production, and changing our whole manner of living.

Today, approximately three-fourths of the people across the country live in urban centers. At the turn of the century it took six persons on the farm to feed one person in the city. Now one farmer is overfeeding nine city dwellers. What has this great transition from farms to factories meant to education? Due to the many exceptional aspects that have taken place in the lives of children, special educators must turn their attention to helping deal with changes which are affecting schools in urban centers.

First, the American family has taken on a high degree of mobility. This is characteristic not only of families with unstable income and employment, but also of substantial middle-class families whose assignments with modern corporations have become nationwide and even global.

For the schools, however, the problem is most intense in the case of those families which, for one reason or another, are periodically in economic distress. The migration from foreign countries into our large cities, a phenomenon characteristic of the first quarter of the century, has been replaced by migration from the coal and cotton fields.

In many instances the economically distressed family occupies sub-standard housing. There is severe overcrowding. Many families have disintegrated when children from southern communities have been sent north to live with relatives.

Likewise, transiency takes place within the city, from one section to another. Displacement because of condemnation, clearing of land for highways and expressways, and demolition for purposes of urban renewal account for much of the mobility to be found in city school districts. Abandonment of families by the alleged "breadwinner," and even attempts to avoid financial responsibility to the landlord account for other movements. It is not unusual in central area schools for eight out of ten pupils -- or 25 in a typical classroom of 32 -- to have moved in or out of the attendance district in a six-month period.

Under these circumstances, the problems of providing classrooms and teachers, of predicting enrollments, of distributing the teaching load, of providing any acceptable degree of continuity in instruction -- indeed of even getting to know the child as an individual -- have reached unforeseen proportions. More descriptive and meaningful record systems and convenient and prompt transmittal arrangements are certainly necessary.

Secondly, a unilateral society is emerging, one no longer characterized by the cross-section of economic, social and cultural levels typical of the traditional American community. Where once solid residential sections have been abandoned in the heart of the central city, whole areas have been taken over by transient or economically unstable families whose neighborhoods now lack their former cohesiveness, pride and motivation.

In many instances there is a revolt against previous social, economic and moral standards by both parents and children. Often there is a growing insensitivity to basic morality, and indifference -- even hostility -- to law, order, and authority. Middle-class example and leadership toward traditional respect for persons, property, authority, education, law, and government, have been replaced by neighborhood codes of behavior and conduct.

Unfortunately, in these deprived areas are the higher rates of unemployment and unemployability, the heavy dependence upon public welfare and aid to dependent children, a higher rate of illegitimacy a low educational achievement by parents and children, a discouraging lack of motivation to succeed, and the ever-present source of racial and cultural conflict.

Thirdly, this convulsion within the city has created whole cores or pockets where educational problems are intensified. Until recently we talked about the unusually bright child or the physically handicapped child as an "exceptional" student, which he was in a typical, cross-section pupil population. Now it is not uncommon to find whole schools where the gifted or the handicapped child is no longer the exception, but the rule.

In many cities it is possible to find schools where the average IQ is below 90. On the other hand, one high school in a city of several high schools may have 70 percent of the top intellects of the city.

Schools like these demand whole faculties of teachers who are skilled at working with the exceptional child. These are new dimensions we cannot ignore if our nation is to be served. It is a startling change to realize that whole vast cities -- among the ten largest in the nation -- may not be able to compete with a small suburban school system in National Merit or state scholarship awards. This, and the revision of educational systems to serve the new need, must be designed and interpreted to our profession and lay citizenry as well. Schools are, or should be, designed to serve the pupil.

Fourthly, the city has become the mecca for the mentally, physically and emotionally handicapped child. In the past, special education has been concentrated in our urban centers, where trained personnel and better facilities have been available. As a result, rural families confronted by the problems of rearing a handicapped child have learned to move to the centers where they can get help. Frequently we have calls from the east, from the south, the southwest, inquiring about our special services from families who are contemplating a move. As a result, these classes grow at a disproportionate rate. In my city, for example, where the school-age population has grown by a third over the past decade, special education classes have increased by a third in the past four years.

Fifthly, middle-class oriented teachers are finding it difficult to cope with the complexities of urban teaching.

Finally, American high schools are being called upon to educate a whole class of students for which they were never designed. I refer to the 20 percent of the population with the lowest academic ability -- students who traditionally have dropped out before getting into high school.

Today, the employment pool for teenagers is rapidly drying up. In our largest Ohio city it was recently found that two-thirds of the youth 16 to 21 years of age who were out of school were also out of work. Compounding the problem, our highly mechanized military establishments have had to raise their standards on the uneducated and unskilled.

If by special education we mean instruction to meet the needs of children who differ markedly from the norm, we have today a whole new class of "exceptional" children whom the Educational Policies Commission has chosen to call "disadvantaged Americans." Helping them to overcome the handicaps of economic, social and cultural deprivation is a task as challenging as any we have ever faced.

Ways Parents and Teachers Can Meet These Problems.

We can encourage local pride. The emergence of special education is one of the thrilling and rewarding success stories of education in our time. Although there is much to be done, our fellow citizens should be reassured by what has been accomplished. This implies an understanding of special education and a broadened concept of the total educational needs and program of the community.

America has shown the world the meaning of humanitarian concern in action, by recognizing the fundamental right of each child to self-realization. In a series of conferences with heads of teacher organizations and ministry officials in a trip around the world last summer, I learned the respect which foreign educators have for our individual-centered schools. This was evident even in France, the birthplace of testing and individual analysis. But it was equally tangible in Bagdad or Bangkok as they asked particularly about PTA. Interestingly, even the USSR, whose schools regard all children as equal and present a uniform curriculum to all learners, now has a department of study called "defectology."

We should avoid over-regulation. There is the temptation in any field of specialization to compartmentalize. This is not always best for uncompartmented children. Sometimes this results from educators' zeal in writing unrealistic standards for special classes. Just as often it comes from zealous parents pushing, understandably, for their special interests.

In dealing with problems as complex as those of the exceptional child, we must place a premium on sound and efficient administrative practices. This is essential if for no other reason than economy, since special classes already cost two, three or more times as much as normal classes. We must guard against excluding generalists from the field. Local flexibility to group and experiment must be maintained within the necessary framework of state encouragement and supervision.

We should recognize increased state responsibility. One of the most important roles of state government in special education is financial. To assume responsibility for the adequate instruction of the growing thousands of slow learners, occupationally untrained, culturally deprived and otherwise handicapped children in our urban centers would go far beyond the means of any previous concept of special education. By no stretch of the imagination would existing or foreseeable local resources be adequate. Many of the problems of the handicapped child relate to welfare, which generally has been considered to be a state function. If action is to be taken in our legislatures, it will require parent and school cooperation to inform the citizenry.

We can increase the public's understanding of educational opportunity. Special education, whether it involves teaching the slow learner, or physical therapy for the orthopedic child, requires special grouping, special teaching, and often special facilities. These can be sources of misunderstanding, misapprehension and even of jealousy. Whether courses for the gifted, such as Advanced Placement and honors classes, can be continued or whether they will be wiped out as ability grouping was in the 1930's with accusations of undemocratic practices, may depend upon how well both parents and teachers can accept differences as normal, and perhaps needed assets of our society. Those who are most closely concerned with exceptional children of all kinds must help others to realize and accept the importance of individual differences in a free society.

Finally, we can work to reduce segmentation in our field. Parents and schools can achieve their goals best through unity and harmony. Groups of parents of exceptional children should be welcomed into PTA councils; and all groups should be helped to understand and accept the total school program. Parents should be solicited for their concerns and suggestions. Their attitudes can have a dynamic impact on the progress and development of a child. The limitations and assets of the child should be interpreted to the parent, steering clear of medical or psychiatric areas but brining professional diagnosis to aid the parent.

Our nation today needs all the manpower and brainpower it can muster. It is for special educators to make the defective and deprived become contributing rather than receiving members of society, and to challenge the gifted to take their rightful roles of leadership and creativity.

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ELIMINATING ARCHITECTURAL BARRIERS FOR THE HANDICAPPED AND THE AGED - AN ANATOMY OF ACTION IN NEW YORK STATE

Joseph Fenton

On June 27, 1961 the newspapers, radios and television stations announced the following news item that emanated from the Office of the Press Secretary to the Governor of New York State:

> Governor Rockefeller has directed that all present and future State-owned buildings be modified to provide easy access to persons with physical handicaps. The new State policy follows a 1961 recommendation of the Governor's Council on Rehabilitation and the Interdepartmental Health and Hospital Council.
>
> The Governor has requested the State Department of Public Works to incorporate such features as gently sloping ramps, ground-level entrances, automatic treadle door openers and handrails in the plans for all new State structures. The Department will also survey existing structures to determine what steps may be taken to provide comparable features in these buildings.
>
> The policy will not only enable physically handicapped persons having business with State agencies to visit these offices in person but will also permit more extensive employment by the State of those with ambulatory impairments.
>
> "Modifying construction plans for State buildings in this way," the Governor said, "will greatly increase the opportunities within State government to provide useful employment for the handicapped. I was delighted to receive this proposal from the Council and to initiate such policy as just one more step in New York State's long record of achievement in the field of rehabilitation and as a major employer of the physically handicapped."
>
> As initial measures the Governor has received revised plans for buildings now under construction or design at the Albany office Campus Site. The three buildings of the Department of Public Works (Buildings 4, 5 and 7) and one of the buildings of the Department of Taxation and Finance will be provided with a gently sloping sidewalk which will be level with the building entrances.

The Division of Employment Building, largest in the Campus group on which construction will start this summer, will have ramps on both east and west entrances and automatic treadle door openers.

The first cafeteria, also in the current construction program, will be provided with a ramp with railings leading directly to the dining room of the west side of the buildings.

In a number of instances access by special approaches will be unnecessary where entrance walks are flush with the first floor. This is the case at Building 22 in Albany housing the Division of State Police and the Division of Military and Naval Affairs and at the new State Office Building in Buffalo.

Dissecting this action and studying its anatomy should be helpful to other states interested in considering similar procedures.

Firstly, it must be stated that the effectiveness of any action is directly related to the level of administrative interest one is able to obtain. In New York State, we are most fortunate in having a Governor whose concern for rehabilitation matters takes no "back seat" to any others. Not only is he interested but he is also very knowledgeable on the subject as well. ----

With considerable background and interest, the Governor brought to his office in New York State many innovations. One such was the establishment through Executive Order, of the New York State Interdepartmental Health and Hospital Council. This Council consists of the Commissioners of Health, Social Welfare, Mental Hygiene, Education and the Superintendent of Insurance. It was established primarily to provide a vehicle for continued exchange of information and for cooperative study and action by the state agencies having responsibility in the fields of health, education, welfare, mental health and hospital care.

The areas designated to the Council for study include rehabilitation, health services for the aging, alcoholism, narcotic addiction, mental retardation, emotional disturbances of children, standards of hospital facilities and services, methods of financing hospital care, and others as may be assigned by the Governor.

In order to fulfill its objectives the Council has organized several major committees based upon specific problem areas. Each of these committees include Deputy or Assistant Commissioners representing each of the departments on the Council and, in addition, representatives of other departments having responsibility in a certain area.

One important committee of interest to us today is the Council's Committee on Rehabilitation, whose membership consists of, in addition to representatives from the departments on the Council, representatives from the Workmen's Compensation Board, the Governor's Committee on Employ the Handicapped, the Department of Correction and the Selective Placement Division of the Department of Labor.

Another important organizational procedure instituted by the Governor was the appointment of a ten member Governor's Council on Rehabilitation. This Council is composed of ten citizens outside of state government service from various sections of the state who serve without remuneration. The Council members are outstanding professional persons in fields related to rehabilitation and have been appointed to advise the Governor and the Interdepartmental Health and Hospital Council on matters relating to rehabilitation. This is done through study of programs in rehabilitation under the aegis of state agencies, study of rehabilitation needs expressed by volunatry agencies in the state concerned with rehabilitation and study of policy statements on rehabilitation matters developed by the Interdepartmental Health and Hospital Council.

The Governor's Council on Rehabilitation has enjoyed a close working relationship with the Rehabilitation Committee of the Interdepartmental Health and Hospital Council and together they have made great strides in developing rehabilitation programs within the state. The origin of the Governor's directive modifying state-owned buildings to provide easy access to persons with physical handicaps is a result of a policy statement developed jointly by the Rehabilitation Committee of the Interdepartmental Health and Hospital Council and the Governor's Council on Rehabilitation. ---- This statement was referred to the Interdepartmental Health and Hospital Council who in turn unanimously adopted and approved the statement for referral to the Governor. The Governor's Council on Rehabilitation in their next report and personal meeting with the Governor, advised him of the desirability of implementing this recommendation. The rest remains as history.

In a recent interim report, the New York State Department of Public Works and the Office of General Services stated the following steps have already been taken to implement the Governor's directive.

1. STATE UNIVERSITY

   (a) All buildings in the planning stages are to have at least one (1) entrance at grade level or ramp with hand rails.

   (b) Ramps and hand rails have been incorporated at one entrance in the plans for the new science buildings at Cortland and Fredonia. These buildings are now being processed for contract bidding.

2. STATE OFFICE BUILDINGS

   (a) All buildings presently under construction and in the design stages at the new State Campus Site in Albany and the new State Office Building in Buffalo have incorporated ramps and hand rails for at least one (1) entrance to each building for the physically handicapped.

   (b) Studies and estimates are now being made for the existing buildings at the Campus Site; Alfred E. Smith Building, Albany; D. & H. Building, Albany; Syracuse Office Building; and the Buffalo Office Building in order to establish required work necessary to make these buildings accessible for the physically handicapped.

3. STATE HOSPITALS

   (a) All existing structures have provisions for the physically handicapped and ramps and hand rails are being incorporated in the Bronx State Hospital, Building No. 12; and the Manhattan State Hospital, Building No. 110; which are presently in the design stages.

4. STANDARD SCHOOL PLANS

   (a) All necessary provisions for the physically handicapped will be incorporated in the Standard School program, which is presently in the design stages.

5. BUILDINGS AND OFFICE SPACE LEASED BY THE STATE

   (a) In all future buildings that are erected for the state under a lease-purchase agreement, we will take steps to assure that there will be adherence to the Governor's policy of providing accessibility for people with ambulatory impairments.

   (b) For all presently existing state office buildings, we have asked the state architect to prepare plans for providing accessibility for handicapped persons. When plans are submitted to us, we will make appropriate budgetary arrangements.

(c) We are now attempting to learn if it is presently possible for people having ambulatory impairments to use buildings completely leased by the state, such as those used by the Retirement System, the Department of State, and the Department of Mental Hygiene.

Also in New York State, an outstanding example of the concern for the handicapped which has been transferred into action are the special features being incorporated for physically handicapped persons in the plans of the Lincoln Center for the Performing Arts. These plans, based on recommendations of the Institute of Physical Medicine and Rehabilitation, New York University Medical Center, have removed the architectural barriers that have previously prevented many disabled persons from sharing in the performing arts of the opera, dance, drama and the concert hall. The Center is a tax-exempt, non-profit corporation organization consisting of a group of buildings in New York City which will house six artistic organizations, including the Metropolitan Opera, New York Philharmonic, the Juillard School, a theater for the dance and operetta, a repertory drama theater and a library museum.

Each of these six buildings is designed to include special features for physically handicapped persons such as - accessibility from the top level of an underground garage, with no steps or ramps. Special parking areas near the exits of the garage will be reserved for persons with physical disabilities. All entrances directly from the street are on street level, so that steps and ramps will not be required. Every floor of the building is accessible by large, attendant-operated elevators.

On the main floor of the Philharmonic Hall there will be a minimum of ten seats that can be removed to accommodate persons in wheel chairs. Consideration is being given to the possibility of making 150 seats removable to accommodate special parties for which advance notice would be given.

In the Orchestra circle on the second floor of the Philharmonic Hall, each loge will accommodate two wheel chairs.

In the Metropolitan Opera House, consideration is being given to making the last two rows of seats in the Orchestra removable.

The bar and restaurant are on the same level as the Orchestra, making them accessible by wheel chair without using steps. All main entrances and exits are at sidewalk level with adequate elevators to all floors. Rest room facilities in the Philharmonic Hall will be in the Lobby at the same level as the garages, and on the main floor. In each woman's rest room two toilet stalls will be equipped with 36 inch doors to open out to accommodate wheel chairs and will be fitted with "grab bars". One stall in each men's rest room will be equipped in the same manner. Lincoln Center will also have special telephones usable for persons in wheel chairs.

Instead of group hearing aids which are now available in some churches and theaters, the Lincoln Center Building will be equipped with small transistor amplifiers available for rent, as binoculars are rented at race tracks and theaters. The type of carpeting best for persons in wheel chairs and crutches is also being considered.

Although New York State has done much toward breaking down the architectural barriers that have prevented the handicapped and aged indidivuals from making extensive use of public buildings, there is still much to be done.

The Governor's directive assures the citizens of New York State that all State owned buildings will provide easy accessibility to those with ambulatory impairments. However, this directive can not be extended to counties, cities, towns and villages because of existing local autonomy in building codes. Ways and means must still be developed to reach and educate the responsible local agency officials and help them to understand the importance of modifying their building codes so that these buildings will be accessible to all their citizens. Also, the challenges of reaching the private building industry are great. Methods must be developed to make every architect and builder aware of the advantages in planning and constructing buildings so that the special needs of the disabled and aged population are taken into consideration.

In this regard, I wish to commend the National Society for Crippled Children and Adults and the President's Committee on Employment of the Handicapped for the rapid progress being made in disseminating this information. Recently, in discussing some unrelated building plans for my own home, I casually asked my architect if he had any knowledge of the special adaptations that should be incorporated into blueprints in order to make homes usable by people with ambulatory impairments. Just as casually he replied, "Why certainly I do! There is a nation-wide effort being made to inform all architects of this. I received a kit of the American Standard Specifications and other available materials on architectural barriers through the mails last week.

Joseph Fenton, N. Y. State Governor's Council
on Rehab., Albany

THE HANDICAPPERS OF MARIN COUNTY

Robert E. Foster

"A nurse couldn't have taken better care of me." These were words of high praise given Carla, a young girl of sixteen, from a recent high school graduate who, since his first polio attack, had been in and out of hospitals for eight years. Jim had recently been operated on for curvature of the spine and was confined to bed with an incubator pumping air into his lungs through a tube inserted into an incision in his throat. However, it came as no surprise to hear that Carla was taking good care of Jim for this story had been repeated many times in Marin County since the beginning of the Handicappers.

The Handicappers are unique in that they are not members of a service club or a school organization but are simply graduates of an eight week course of instruction, "Introduction to the Problems of the Handicapped." All boys and girls of high school age were invited to attend the course. Students from five different high schools in the county have attended one or another of the courses given during the past four years with over two hundred having completed the eight weeks of instruction.

Sponsorship for the course has varied and actually any group in any community can sponsor this course. The first year it was sponsored by the Marin County United Cerebral Palsy Association. For the last three years it has been sponsored by the San Anselmo American Legion Post, 179, of Marin County, California.

The need of service to the handicapped in the community, the need for community education, and the need for recruitment of professional workers in the various disciplines concerned with the handicapped, were answered in my experiences directing summer recreational programs for handicapped children where it was necessary to rely almost exclusively on volunteer teen-age help.

There has been a lot of adverse publicity given young people but I personally believe they are wonderful. They have constantly demonstrated their resourcefulness in all kinds of situations - situations usually involving the welfare and happiness of their young charges.

Given responsibility, these young adults (and I prefer to call them young adults) discharge it with credit to themselves and to society in general. They feel and accept the responsibility for the welfare of others. Here then, in these young people, was the answer to the major issues which basically establish the three-fold purpose of the Handicappers. This three-fold purpose is:

1. To further community education by helping the young people of high school age to have greater understanding and knowledge of our nation's physically and mentally handicapped citizens.

2. To help in the continuous care of the handicapped by giving meaningful service to physically and mentally handicapped individuals, to their parents and to the organizations and agencies serving them.

3. To explore professional opportunities available for graduating high school students interested in the problems of the handicapped and to help them find experiences in working in the area of their interest.

The course of instruction, given one night a week from seven to nine-thirty, has varied somewhat from year to year but has been essentially the same as the following outline used this year in Marin County:

1st week:	Registration. "Orientation to Different Handicaps" speaker, Dr. Bramwell from the Sonoma State Hospital.
2nd week:	"Attitudes Toward the Handicapped" speaker, Dr. Jampolsky from the Marin County Mental Health Association.
3rd week:	"Speech Therapy for the Deaf and Hard-of-Hearing Child" speaker from the Marin County Hard-of=Hearing Society.
4th week:	"The Orthopedically Handicapped" speaker from The National Foundation.
5th week:	"The Handicapped Adult" panel discussion of handicapped adults from the Marin County Society for Crippled Children and Adults.
6th week:	"The Retarded Child" panel discussion by parents of retarded children from the Marin Aid to Retarded Children and Adults Society.
7th week:	"Schooling for the Handicapped Child" demonstration at the Marindale School for Orthopedically Handicapped by the staff of the school and aided by the United Cerebral Palsy Association of Marin.
8th week:	Graduation exercises with speaker from San Francisco State College, Dr. Mabel Whitehead, professor in the special education department.

Upon completion of the eight week course the participant's names were included in a brochure that was distributed throughout the county to doctor's offices, volunteer health agencies, parent groups, individual parents and the county health department. The brochure gave a brief outline of the course along with the names, addresses and phone numbers of the boys and girls having completed the course. It was now up to those needing service within the community to make use of the interest evidenced by these young people.

That the community has extensively capitalized upon this evidenced interest was significantly verified in the replies to a follow-up study made last year of those having taken the course of instruction. Experiences reported by these young people included babysitting with handicapped children, caring for a post-polio boy, working with the Junior

Red Cross, volunteer work at Sonoma State Hospital for the mentally retarded, volunteer work in summer recreational programs, counselors in camps for the handicapped, caring for the aged and the disabled, working in rest homes, working as a Pink Lady in the hospital, tutoring a brain damaged child, being a companion to a retarded girl during the summer, helping at a Christmas party, serving as a water aid in helping handicapped children learn to swim, helping to solicit funds for volunteer agencies and serving as members of volunteer agencies.

In the follow-up study in which there were 96 replies, 32 indicated that they had identified what they wanted to do as a vocation by taking the Handicapper course and by their subsequent experiences in the community. Of these 32, 30 were in college pursuing their individual goals. These goals included three physical therapists, two occupational therapists, one recreation therapist, five nurses, six social workers, seven special education teachers, one medical technologist, two speech therapists, one physical education major and two psychologists.

The guidance value in such a program can be seen in the reply of the young lady training to become a medical technologist, "I was trying to decide between O. T., P. T., and medical technology and after two years of experience with handicapped children I found that I didn't have the patience to work with them. However, I wanted to help them in perhaps finding a cure for one of their ailments and am now studying to become a medical technologist."

The three-fold purpose of the Handicappers should be effective in many communities other than Marin. The problems identified leading to these purposes will be with our society for some time to come. It will be part of our responsibility as adults and professionals allied with helping the handicapped to give these young people an opportunity to participate in a meaningful way in the complex of society's social problems in the continuous care of the mentally and physically handicapped.

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A SPEECH AND LANGUAGE DEVELOPMENT PROGRAM FOR YOUNG RETARDED CHILDREN

George H. Friedlander

The development of curriculum programs for mentally retarded children, trainable or educable, is a matter of increasing concern and importance to educators and specialized personnel in the field of the mentally retarded, to the community and to the parents of the children. As an increasing number of local and state legislatures enact provisions mandating classes for the mentally retarded, and facilities for the mentally retarded increase, the development of sound curriculum programs and procedures becomes the concern of all of us.

During the course of thirty years of practice in the field of speech and language development, and most especially during the past 5 years at the Institute, I have been impressed by the initial complaining presentation of parents who, beset with the multitude of physical and behavior problems that exist in their mentally retarded children, focus so frequently upon the area of speech and language. As they sit across from me at the desk, they talk about the lack of language for communication, and say, "if only he would talk better, he would be so normal". Part of our program for the parent is, of course, to make them see that if only he were normal he would talk better, but that even as a retarded child he could be helped to communicate better and that he deserves this opportunity.

The first procedure in setting up the speech and language development program was to develop a diagnostic instrument. Through experimentation and evaluation we prepared a diagnostic form and procedure which covers the following areas:

1. The parents' impression of the child's communication process with dates of onset.
2. The facts about siblings and their language and speech performance.
3. The parents' report on the child's sucking, chewing, blowing, babbling, words, intelligibility, etc., with an adjoining column for these items as they are observed by the examiner.
4. Recognition of selected objects -- by pointing, matching or verbalizing.
5. Recognition of selected pictures -- by pointing, matching or verbalizing. The pictures used here were developed and drawn by hand from models submitted by me. They are on 5" x 5" composition board, in black outline with simple color representation. No more than two colors were used on any one picture. Revisions were made after testing in order to achieve clarity and easy recognizability. These pictures were selected both for recognition values and for articulation evaluation. We are at present engaged in the process of attempting to standardize the levels of recognition and articulation in studies of normal and retarded children. This work should be completed within the next year.
6. Auditory memory span -- for this item words, numbers and sounds are used depending upon the child's level of functioning.
7. Comprehension and Recall -- four pictures were created to test comprehension and recall of story items. Picture "1" is a boy of about 7 whose name is Bob. Picture "2" is a girl of about the same age whose name is May. Picture "3" shows the boy catching a ball. Picture "4" shows the girl jumping rope. These items were selected after many pictures had been pre-tested for easy recognition. Each item is tested by questions for immediate recall and then the full story is tested for delayed recall.
8. Auditory evaluation -- this evaluation is made (a) by observation; (b) by use of noise makers; (c) by adapted play audiometry and (d) by pure tone audiometry with or without conditioning.
9. Summary --
    - (a) A summary of the receptive level is made using a scale adapted from the Gesell Developmental Schedules and the Cattell Measurement of Intelligence of Infants and Young Children.
    - (b) A summary of the expressive level is made using the Gesell Scale and selected items from research studies on child speech and language development.
    - (c) The articulation or phonetic levels are adaptations of studies by Drs. Templin, Metraux and Meacham.

The diagnostic instrument described is used on initial examination and periodically after 12 months, 18 months and 24 months of service.

The curriculum in speech and language development was the result of an evolutionary process. We put down some simple ideas more than 5 years ago, and have expanded, revised, condensed and evaluated. What I am presenting to you, therefore, this morning, is the latest curriculum. At least, it was the curriculum when I gave this paper to our secretarial staff to be mimeographed two weeks ago. In addition to the curriculum, I would like to present to you too, under each of the main divisions, several methods and procedures which our therapists use at the Institute. I am sure they are not new or startling, but they have evolved in the course of actual work with our children, and they are procedures which the members of our staff have used with success.

The curriculum is presented as a series of sequences in the development of language and oral communication, for our home training program, our individual therapy program and for the classroom teacher. In initiating activity, we take the child where we find him and by progressive steps, attempt to lead him to the level of his best potential. We try to take the existing unstructured mode of communication and work toward conscious, controlled, usable and understanding communication.

A. To develop auditory awareness and discrimination

1. To be aware of sounds in the environment, i.e., car, plane, music, banging of toys.

2. To localize sound, i.e. direction, area location.

3. To discriminate among non-verbal sounds, i.e. to associate the sounds with specific objects and activities.

4. To retain and reproduce simple sequences of non-verbal sounds (i.e. drum beats) as preparation for disyllabic and polysyllabic oral sequences.

5. To retain and reproduce simple bisyllabic and polysyllabic oral sequences.

In this sequence we take the sounds that exist for the child in the environment - the voice of the therapist, the ringing of the school bell, the fire engines going by outside, the garbage truck and the clanging of the cans, the phonograph, the piano in the music room and the blocks that are dropped by children at play. These sounds are pointed out to the child and his attention directed to them. We show him where they come from and attempt to develop recognition of these sounds when they occur again. We use records with sounds of trains, cars, animals, noises of any kind which can be related to the child by objects or pictures. We make the child aware that the loud sounds he makes in banging or shouting are loud sounds by placing our hands over our ears, and showing by our facial grimaces that they are disturbing. This process of making the child aware that sounds in the environment are attached to things in the environment and have meaning is a first step with many of our youngsters who are non-verbal when they come to us. Frequently, it is necessary to use amplified sound to break through the barrier of not listening and to focus the attention of the child on the sounds with dramatic intensity. Under items 4 and 5, we progress from the awareness of a single beat of a drum or hand clapping, to multiple sounds in varied combinations. The child imitates what the teacher has produced. If the child has any verbalization, even a single vowel sound, we attempt to develop this monosyllable into conscious bisyllabic and polysyllabic repetitive utterances, so that "Ah" becomes "Ah-Ah" and so on in various combinations.

B. To develop basic listening habits

1. To sit and maintain attention on an activity centered around an auditory stimulus, i.e. music, voice.

2. To focus upon voice, face and gesture of speaker.

In developing the ability to focus on auditory stimuli, the therapist removes all distracting visual stimuli which may interfere with this concentration of attention. In first contact with the child, the therapist may sit across the table from the child, may touch the child's hand across the table to focus the child's attention upon the therapist and what she is going to say. Frequently a hearing tube constructed from a stethescope ear piece, a length of rubber tubing and a plastic funnel, serves to make the speech of the therapist direct and personalized to the child. With some children, it may be necessary to sit next to them, while listening to a record, and hold the child with your arm around his shoulder to help the child control motor overflow and random gross motor responses. When pictures or objects are presented, it is well for the therapist to hold them at a level just below or alongside her mouth, so that the child's attention can be directed at the object and the vocal utterance without specific direction to do so. Records, stories and game activities can be used with the therapist controlling the use of the materials so that they come slowly but clearly within the conscious attention of the child with the verbalization that should accompany it.

C. To develop the awareness that sounds and/or words have meaning

1. To learn to recognize the names of common objects, people and actions.
2. To learn to recognize pictures representing common objects and actions.
3. To carry out simple to complex requests and commands.
4. To develop recognition of size, shape, color and space differences.

The parents play a leading role in assisting us in developing this sequence. In conference we suggest and instruct the parent in the use of simple language to accompany the daily living activity of the child. Dressing will involve the parent in saying the name of the articles of clothing during the process of dressing. We attempt to avoid teaching a child words which are divorced from the immediate experience of the child. In the therapy sessions, the therapist can create optimal conditions that are real and meaningful to the child, and in which the child can find pleasure in participation. This activity can be set up and repeated so that the objects and the actions become verbally meaningful to the child. In the activity we can say it and show the child, then say it again and help the child do it, then say it again so that the child may respond to the verbalization. A variety of games, records and play situations can be used. Size, shape, and color can be used in matching and sorting activites in "give it to me" activities, before any reciprocal verbalization is required of the child.

D. To develop modes of communication

1. To encourage the use of meaningful gesture.
2. To encourage the primitive vocal activities of a child as they appear, i.e. humming, singing, babbling, jargonizing.
3. To develop meaningful verbal communication.
   a. by simple sounds as word partials
   b. by simple understandable noun and action words
   c. by words in simple combination
   d. by words in sentences

Although our ultimate goal is verbal communication, gesture which is incipient or random should be refined by direct instruction. "Point to what you want and you may have it". In essentially non-verbal children gesture is telling, and in order to aid communication we should refine the gesture. However, we try as quickly as possible to adapt any random sounds or word partials to use in situations or play activities. We accept anything which is meaningful, without concerning ourselves at this point as to completeness or correctness of word production. There is no real point in trying to regulate the hot or cold water faucets if there is only a trickle of water coming out. You really can't take a shower that way. And so our primary concern is to develop and accept the flow of communication until it is felt that enough is coming to warrant a more direct approach to clarity.

E. To develop degrees of performance. The "modes of communication" (1, 2 and 3 above) can exist on three general qualitative levels of performance.

1. Responses are directly elicited by teacher demonstration or request, i.e. teachers says and demonstrates "clap hands", teacher says and demonstrates "point to the ball" or "say, 'bell'."

2. Child communicates without teacher demonstration but by request, i.e. teacher says "clap hands", "what is this?"

3. Child communicates voluntarily, without direct demonstration or request by the teacher.

In this sequence we are concerned with the development of independent and spontaneous communication on the part of the child. We move from teacher verbalization and demonstration to teacher verbalization without demonstration, to that most to be desired and hopefully to be achieved goal of spontaneous communication by the child to the teacher.

F. To develop clarity in verbal communication.

1. To develop more socially acceptable vocal production

   a. To encourage audibility and intensity of speech at a level compatible with such environmental factors as size of room, distance to listener, noise level.

2. To develop articulatory clarity

   a. In primary vowel and consonant sounds as a part of language development.
   b. In vowel and consonant sounds as corrective procedure with children manifesting more advanced language abilities.

The degree to which the above will be utilized is determined by the speech therapist after a thorough and realistic analysis of the intellectual, physiological, psychological and social status of each individual child. If instruction is carried on, it is done in a multi-sensory procedure, using kinesthetic, visual, tactile, and auditory techniques.

In addition to the speech and language program with individual children, our speech therapists work closely with the classroom teacher. There are periodic conferences about what can be done in therapy sessions and what can be done in the classroom. The teacher reports on the use the child is making of communication in the varied activities of the classroom. Therapists frequently conduct story telling and dramatic activities in the classroom to demonstrate procedures and techniques. There is an in-service training program in speech and language development for teachers which is conducted by the supervisor assisted by the speech therapists. Although the Institute houses a multidisciplined staff, we attempt to achieve an integrated service for the child and his family.

During the past 2 years, the Institute has been engaged in a research study under the National Institute of Mental Health involving sixty children with IQ's below 20. Twenty were below 3 years of age and were in a special home training infant program. Twenty children were in a three year group, ten in a home training program, and ten in full service at the Institute. Twenty children were in a four year group with ten children at home and ten at the Institute. Controls were set up for each child. The study involved the total services of the Institute and an evaluation of progress in each area of the service. The reports and statistics will be completed this summer and I hope to have the pleasure of reporting to you on the results of this project next year in New York.

In May, 1958, the Institute published a report on a study of 15 mongoloid children, eight of whom had been in service for a year and seven for two years. The study arose out of a routine evaluation of our work. In this group of 15 children, the chronological ages were from 4 years to 7 years 5 months, M. A. from 2 years 4 months to 4 years, S. A. from 2 years 1 month to 4 years 4 months. Thirteen of the IQ's were between 55 and 65, with one at 47 and another at 38. Time does not permit more than just a summary of the conclusions. It was evident that there were gains of significant proportions in the areas of verbal communication of verbal recognition of objects and pictures, and of comprehension and response to requests. There were some gains in articulatory clarity but few significant gains were made. There were no gains or relatively slight gains in voice quality and voice use. We felt, in spite of the pessimistic tones of numerous studies on institutionalized mongoloid children, that the mongoloid children in our service derived considerable benefit from the speech and language development program.

During this past year, each department at the Institute began to collect data for a summary report on their five years of service. This material is now being tabulated and interpreted statistically and will probably be published at a later date.

Our work at the Institute has demonstrated to us that if we start early enough in the child's life to supply the extra stimulation, the extra training, the special attitudes and the special attention we can avoid the bleak years and the frantic efforts to catch up. We plan a future project to study the development of language and verbal communication from infancy to four years. We hope to explore the relationship between intelligence and the onset of speech. We intend to investigate the effectiveness of various conditioning devices for pure tone audiometry with moderately and severely retarded children. The areas of speech, hearing and language development with retarded children, are fertile fields for the therapist and the research specialist. We at the Institute will continue to work and to search. We hope we will have the opportunity to present some of our work to you through the Journal and at future conventions.

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AN INTERDISCIPLINARY PRACTICUM ON THE DIAGNOSIS OF EDUCABLE RETARDED CHILDREN

Frank Garfunkel

During the 1961 Summer Session at the University of Connecticut the special education and psychological examiner programs cooperated in setting up a five week interdisciplinary workshop on mental retardation in children. This was held at and with the cooperation of the Mansfield State Training School. The personnel included thirty teacher trainees, fifteen psychological examiner trainees, forty educable retarded children divided into four classes, and part-time speech therapists, social workers and psychologists. Each class was supervised by a demonstration teacher and the entire program was under the joint supervision of an educator and a psychologist. The general goals of the program were to obtain a deep and comprehensive understanding of the children and provide an interdependent training situation which would maximize the possibilities of developing meaningful communication between teachers and psychologists.

The program for accomplishing these goals was as follows: teacher trainees were divided about equally into the four classes, as were the psychological examiner trainees. Both were assigned children and were required to carefully accumulate data on their functioning in the classroom, the psychometric situation, the playground and the dormitory. Teachers observed the testing of those students that they were assigned to and psychologists observed the children in the classroom situation. The diagnostic report that came out of these interdepartmental situations was the result of this planned interaction, rather than of individual contributors. In fact, the final report can be considered an interaction in itself. This will be carefully elaborated on in the discussion of the results, below.

The psychologists were responsible for selecting a battery of tests after observing the child in the classroom and discussing the child's behavior with the teacher. The teacher observed the testing of the child and discussed it with the psychologist prior to the final write up. This discussion was an essential part of the process for it gave the teacher a chance to react to psychometric behavior and to relate it to her classroom work with the child. Furthermore, it often led to the utilization of different tests in order to test hypotheses about the child's behavior which were introduced because of the teacher-psychologist relationship. These hypotheses were some of the most meaningful material that came out of this project.

Teachers were required to carefully observe their children in a great variety of situations and to develop behavioral hypotheses about their functioning. Since the psychologists were required to observe the child in the classroom and to communicate their reactions to the teachers, the structured observational study of each child also was an interaction. As a second step in their observational study, teachers manipulated behavior in the classroom and in other situations in order to test hypotheses about the behavior of their children. This manipulation took the form of adult and role substitution, activity differentiation, and task alteration. In many cases there were a series of manipulations in order to explore the variable reactions of a particular child to different kinds of situations.

The teacher-psychologist team was free to call on supervisory and consulting personnel in order to enlarge the scope of alternative explanations of behavior. In this way the social workers and/or the speech therapists became parts of some of the teams and contributed to the interaction which led to individual case studies.

A formal case conference which followed up the informal interaction process, stimulated a public school case conference. These were attended by teachers, psychologists, supervisory personnel and consultants. The communication during these conferences demonstrated the effectiveness of the integrated training procedures. Teachers played an integral role in the discussions and it was readily apparent that the condition of mental retardation was not a dominant one-dimensional syndrome. ---- Furthermore, the descriptions and interpretations of behavior that were given by the teachers led to a clarification of behavioral possibilities. In this kind of situation the teacher was neither just a listener nor just a teller of tales. Her contribution was vital to a meaningful study of the child.

Because of the intimacy of the psychologist's role to the non-testing situation, his interpretations were closely related to the kinds of situations which were educationally meaningful. He was forced to focus his selection of tests and his evaluations upon the pragmatic questions of classroom management. In this way he, too, became a vital part of the evaluation process. It might be added here that the awareness of an individual that he is a necessary part of a diagnostic study of a child has a deep effect on his ability to contributing to it.

RESULTS

An evaluation of the effectiveness of this workshop situation can consider both the dynamic interaction that took place during the experience and the various end products such as the teachers' final reports, the psychometric reports and the case conferences. The latter have already been discussed to the extent that they were part of the on-going interdisciplinary situation. The teachers' reports contained much material that was clearly the result of interaction. These subjective impressions can be supported by an informal objective content analysis of the psychologists' reports of the workshop children as compared to their concurrent reports of children outside of the school, where the work was done independently of interdisciplinary interaction.

In order to accomplish this comparison twenty reports were randomly selected, including ten on workshop-school children and ten on outside children. These included two reports each from ten psychological examiner trainees, one being from the school and the other being from the outside. Then, an exploration was made of the differences between the reports of these two groups. The matching of these two groups involved the condition that each of the ten examiners had tested one child in each group.

The reports of the workshop children were consistently of a higher quality than those of the outside children. More specifically, the following data and inferences were extracted from the comparison:

1. In the workshop group the number of descriptive words and phrases were 35% greater than in the outside group. This suggests that the workshop situation stimulated the examiners to become more fluent in discussing behavior. By itself this says very little but in terms of what follows it is quite significant.

2. In the workshop group 80% of the reports made extensive comparisons between test behavior and behavior in other situations, as compared to 30% in the outside group.

3. While all of the ten workshop reports carefully described the subjects' behavior during the testing situation in terms of concrete examples that were related to the generalities expressed, 50% of the outside reports employed only vague generalizations that gave little insight into the behavior under consideration. Much of this difference can probably be attributed to the contribution of the teacher-observer.

4. The mean number of instruments used was 4.6 for the workshop reports and 3.1 for the outside reports.

5. There was considerably greater variability in the choices of instruments for the workshop reports. This suggests that the workshop experience led to a more careful selection of instruments because of the posing of specific questions rather than the standardized "shotgun" approach which would probably be characteristic of the more independent approach.

6. The mean number of specific recommendations was 4.7 for the workshop group and 2.8 for the outside group -- 66% of the former and 81% of the latter could be made for school age children, more or less randomly, without any examination. Thus, the workshop experience not only stimulated more specific recommendations, but they were more intimately related to the idiosyncratic behavior of the particular children involved.

7. Most of the workshop reports were goal-oriented and the test material was used to facilitate programming. The outside reports were mostly test-oriented -- they tried to get as much out of the test as was possible with little

regard for any clear direction.

8. The workshop reports displayed considerably more spontaneity than the outside reports. This included a greater sense of discovery, a recognition of the interrelationships between various tests which were superficially different and the obvious attempt to communicate ideas that were meaningful and important.

CONCLUSIONS

A psycho-educational report is "true" in so far as it contributes to hypothetical insights that are useful in working with children. In the present stage of clinical psychological evaluation with particular reference to its value for teachers, the questions of reliability and validity, as classically treated, are more or less trivial. Social science is just not at the stage where it can lay claim to being able to present meaningful and unique descriptions of children. As reliable as any single test may be and as highly correlated as it may be with some nebulous criteria of validity, it represents, at best, an arbitrary segment of behavior. The orientation of this study accepts this not as a restriction, but as a working hypothesis. Thus, the instrument of the pragmatic goal, in this case the teacher, must be an integral part of the diagnostic process. This study has shown that by giving the teacher a dynamic role in this process the resulting psycho-educational reports were more useful instruments for working with children not so much because they present more accurate portrayals of children, but because they are verbally, conceptually and instrumentally closer to the child-teacher interaction.

This "closeness" is, however, more than just a quantitative factor. For without it the diagnostic report becomes an overgeneralized and rather useless map of a child's functioning with major locations designated but with little or no indication of the roads to be traveled and the specific goals that must be attained in order to get at more distant goals. "Closeness," as indicated in this study, leads to maps that are detailed in such a way as to strikingly and relevantly treat means and ends because these same means and ends are a part of the diagnostic protocol.

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CAPTIONED FILMS FOR THE DEAF

John Gough

Since most persons here are already familiar with the program of captioned films it is probably not necessary to go into detail in describing the nature and purposes of this program. Let it suffice to say that under Public Law 85-905, enacted on September 2, 1958, there was established in the Department of Health, Education and Welfare a loan service of captioned films for the use of groups of deaf persons.

Assigned to the United States Office of Education for administration, the program actually got under way in October, 1959, with your speaker and a secretary as staff, and with a budget of some $80,000. We were fortunate, however, in an immediate gift of 29 films from the Captioned Films for the Deaf, Inc. of Hartford, Conn. These films went into circulation as Government property just prior to Christmas, 1959, but general circulation did not really get under way until the early spring of 1960. Subjects in this initial group of films included five Walt Disney titles and several RKO and Columbia feature pictures. Some of the prints were rather badly worn and were soon retired from service.

Since this initial start the film service has grown steadily. This year, for the first time, we are operating under the maximum authorized budget of $250,000. At present we have 70 different titles in our library and a total of 210 prints. Six hundred and sixty-two groups of deaf persons are registered for services and our monthly showings for the last six months of the calendar year 1961 averaged 95 showings per month.

Thus far, we have concentrated largely on acquisition of feature length pictures. Since we deal only in 16 mm films and because older pictures are less expensive and more readily available, the titles we have to offer are such things as you might see on the late show on your television set. This is probably not too objectionable to the deaf for the simple reason that they have paid relatively little attention to the movies since talkies came in about 1932. They have a lot of catching up to do and there is a certain logic in beginning at the beginning.

Actually, most of our films do not go back that far. Titles currently being received include ON THE WATERFRONT, a 1954 release, BORN YESTERDAY released in 1950 and OPERATION PETTICOAT of 1956 vintage. Considering the fact that 16 mm releases usually lag somewhat behind theatrical releases, some of our current acquisitions are fairly up to date. In addition to pictures of this kind, we are adding titles such as SIAM, ALASKAN ESKIMO, WATER BIRDS, and a number of educational short subjects in the social and physical sciences.

At present, all films are distributed through a booking facility established at the Indiana School for the Deaf in Indianapolis. To receive loans, groups must register with our office in Washington and receive an account number. A group is defined as 8 or more persons. Upon certification, a group may make application for films. They must agree to abide by a set of published regulations and pay return postage on all shipments. The Office of Education does not furnish projectors, this being the obligation of the local group. Forty-eight of the fifty states are presently using captioned films and the number of users is doubling every six months. This rather phenomenal growth is taking place without any effort on our part to expand or advertise the service. (To do so would be a little like advertising Santa Claus.)

You and others who are interested in children are possibly wondering when more emphasis will be placed on captioned teaching films. The answer is: "just as soon as possible." It should be pointed out, however, that children are not being neglected in our present operation. From July 1 to December 31 just passed, 63% of our showings were to school children. It is a fairly safe assumption that some learning -- painless learning I might add -- took place as they followed the captions in a film such as ALLEGHENY UPRISING depicting incidents in the pre-revolutionary frontier.

We are acutely aware, however, that we have not really begun to touch the possibilities of captioned films as a medium for teaching the deaf child. One need only to think of the extensive use of films with hearing children to appreciate that with captions the motion picture can tap a vast reservoir of material and greatly expand the educational horizons of those who do not hear.

With legislative proposals now before the Congress in S2511 and H. R. 9456, the budget ceiling on Captioned Films for the Deaf and to expand our services to embrace research, training and specialized production, we are naturally spending a good deal of time in planning how we will attack the problems in these areas, if the law does pass.

May I deal with each of these points briefly, to suggest the kinds of things that may be possible under a comprehensive program? Consider first the matter of research. In a practical program such as ours, we are not concerned to any great extent with basic research, but rather in what is commonly referred to as R and D, that is, research and development. We would like to know something more about the effectiveness of various kinds of captions, the effect of frequent use of captioned films on normal reading rate, upon vocabulary growth and language acquisition. We would like to explore the use of slow motion in teaching speech reading, on the effect of alternate captioned and uncaptioned film sequences on teaching speech reading. We think that it might be useful to give some thought to the desirability of more uniform selection of text books for which we could provide supplementary visual aids. We surmise that reading might be greatly stimulated by these and many other techniques which need first to be researched and then put into service on a selective basis. Perhaps films linked up with your group hearing aids might prove useful for auditory training. We would like to experiment with the use of the well known "bouncing ball" technique in stimulating speech. These are but a few of many lines of inquiry that might be pursued, hopefully with improved techniques and materials for instructing the deaf. Incidentally, our plans are not limited to deaf children but will be directed towards projects that might help to facilitate programs of education and training for the adult deaf as well.

Film production is another kind of activity which may become an important adjunct of the captioned films program. Of course, we would be primarily concerned in producing the kinds of films that are not elsewhere available. In the preceding remarks I have hinted at a few of these. Let me suggest a few others. One of the problems faced by the deaf person is that he is a member of a minority group. Living successfully under these conditions requires a certain amount of special orientation. The member of a minority group must acquire certain knowledge, certain habits, certain skills, if he is to live with maximum satisfaction. These learnings should be analyzed and presented in films to help the deaf person meet the problem.

Developing films with greater visual impact, filmstrips re-captioned in language more comprehensible to the deaf child, films for open or closed-circuit television use, job orientation and training films for youths and adults are among the numerous possibilities that come to mind. When one considers that we must reach the truly deaf person almost wholly through his eye and how little we have of visual media that he can really grasp with normal effort, the potential of a film production program begins to assume real significance. Ideas beget ideas. If we are so fortunate as to have the opportunity to move into production activities, we predict that the products will have a stimulating and highly beneficial effect on the education of the deaf.

When I speak of research and production, let me say parenthetically that I do not wish to leave the impression that these undertakings will be carried out in Washington by the Office of Education. It is our thought rather that these things will be done under grant or contract by people and institutions wherever the most favorable circumstances can be found. It is highly important that the field respond actively and imaginatively if the plans I am discussing are to bear fruit. Let me repeat also that all of these matters hinge on whether or not the current legislation actually passes.

A word, finally, about training. Let me mention a single possibility which will indicate in part, the need for training programs. One of the coming developments in the film world is the 8 mm film projector using self-rewinding cartridges. It is entirely possible that within the next five years we may be able to secure small self contained projectors that will accept cartridged film and by either battery power or house current, project the film on a small screen which is part of the projector. The major part of this apparatus is, in fact, already on the market. You can readily imagine the possibilities of having a full library of film cartridges which the child could draw out just as he would check out a book,making use of it at home, in his dormitory, or elsewhere. With such devices at hand, would it not be helpful to train parents, house-parents in residential schools, rehabilitation counselors and others in how they could utilize films for the benefit of the deaf?

May I conclude by suggesting that the ideas which I have hastily sketched are but a beginning. It is my earnest conviction that in captioned films we have an educative tool of real and enduring significance. As education moves forward on all fronts, those of us who have accepted responsibility in the area of educating the deaf must be alert to seize upon every opportunity that will help us to keep pace. On behalf of the Office of Education, and in the name of the deaf I invite your cooperation and support in developing the use of captioned films as a new frontier area which will provide rich harvests in the years ahead.

John Gough, Dir., Captioned Films for the Deaf,
U. S. Office of Educ., Washington, D. C.

THE ROLE OF LAY GROUPS IN TEACHER RECRUITMENT

Mary J. Houde

Scholarships for teachers of exceptional children, including teachers of the partially seeing, are financed by the clubwomen I represent. I'd like to tell you something about this program because I hope you will agree with me that it has played a part, even though small and unprofessional, in the total picture of training for teachers of children with special problems in Illinois .... and also because I want you to know what a project of this kind can do for an organization. I would like to see more lay groups take upon their shoulders projects of this kind .... and perhaps you would too.

I am representing the 207 Junior Women's Clubs of Illinois, part of the Illinois Federation of Women's Clubs. We have approximately 10,000 members. In 1953, the clubs decided to add to their many community projects a state project in which they might all take part. At the same time, leaders in the organization became familiar with the educational program for teachers of exceptional children at Illinois State Normal University. The scholarship project was chosen by the state leaders and never have the clubwomen regretted their choice.

At first, there was a great need for information. There was also a need to "sell" the project on a local level; because state projects are not always popular with club groups that lean toward keeping project money in the communities.

So it was the responsibility of the organization to see that the individual clubs understood that money contributed for these special scholarships WOULD benefit their own towns and cities.

Much written information was put into the hands of the Junior Women's Club members .... so much so that in some towns, the clubwomen found themselves in the position of explaining special education to their communities.

This was all part of the plan. It gave the clubwomen more than an understanding of special education. It gave them a very personal interest. In towns where there were no classes for children who needed specialized help, some of the club groups formed survey teams. They went to the schools, interviewed the teachers and learned approximately how many children (in the opinions of the teachers) needed special help. Statistics were sent to school boards and plans were initiated in some cases to begin special classes and to try to secure specially trained teachers.

I know it happened this way in some towns. It did in my own; and I was a part of a survey team. We were well aware that we lacked professional knowledge in the field; but we felt it was a beginning.

As the general interest of the public grew and special classes were set up in many towns, it became easier to convince new club members of the value of our scholarship program. Probably even more important .... specially trained teachers began returning to the communities and proving their ability with handicapped children. Some of these teachers had used Junior Women's Club scholarship funds.

We hold our fall meeting of the state board of directors at ISNU every year. We meet the scholarship students and are greeted by representatives of the University and the Division of Special Education. During the day, we tour the building, making an attempt to see classes in action. Many officers have toured the building over and over again; but we schedule the tour every year for everyone as a part of our board meeting because we consider it very important for all, especially new members of the board, to see the fruits of our labors. Speaking of labors, it might be pertinent to mention here that the girls make money in various ways for the scholarship program and they work very hard at it. They give home talent shows, sell rummage and baked foods, hold raffles, and one club even made perfume for sale.

Most of the scholarship money comes into the state treasury in small amounts; we encourage every club to donate something, even if it is just $10 or $15. A scholarship donation of some kind is one requirement for a special club award at the end of the season. We encourage full scholarships of $400 or $600 and give special honor at convention to those clubs that raise large amounts. It has become almost a status symbol among our clubs, to raise a full scholarship.

Even though we encourage "full" scholarships, most of our scholarship money is doled out to students by university finance committees in small amounts, as it is needed. We prefer to let professionals handle the disbursement and the choice of recipients.

Until this past year, we restricted our money for use by only second semester students. The original committee felt that the money was more wisely spent if the students had already proven themselves. We made a change this year. We felt that part of our goal was to encourage interest in the field of special education among graduating high school seniors. The money can now be given to freshmen to encourage them in the field. We have discussed, with a university finance committee, the possibility of using funds for research scholarships in the field of special education. We also feel that money would be well spent on graduate teachers who would like to take special education training. For several years after our state project began, all of the money went to ISNU, in the center of the state. A few years ago, clubwomen from the southern part of the state petitioned to give 1/4 of the funds to Southern Illinois University, and that has been done. Now, another university, in the northern part of the state, has asked for 1/4 of the funds.

How much do we earn?

The average earned by our state group for scholarships through the years was from $4,000 to $8,000. Last year, we earned approximately $11,000.

Always anxious to increase the amount, last summer we discussed a special money-making project that might be suggested to clubs. We arranged with a distributor of candles to let our clubs sell them for a fairly good profit. We made one stipulation when we offered the project to the clubs. All proceeds must go toward the scholarship fund. We called it our "light of learning" project. Many clubs took advantage of this plan.

It was a little risky .... because we did not want to lose our full scholarships. We were aiming at the small clubs that seemed to lack money-making ability. The project was successful; and I think it in part accounts for a sharp rise in scholarship money. I wanted to save the total amount raised this year as a surprise for Dr. Phelps at our state convention in two weeks, but I'll tell you now. Remember the average has been $4,000 - $8,000. This year, we raised about $18,000.

In just the past two years, the total scholarship money earned is approximately $30,000, about $3 per club member. As far as I know, that is an outstanding average for a state project. The secret is .... the clubs consider it a local project.

We've talked mostly in terms of money. Actually, our state project is much more than that. It is a combination of scholarship funds and service. And we find that the more service given, the more money earned.

The important factor is understanding. Our members must understand why they are earning scholarship money. Many of our clubs supply outstanding service in their communities in the field of special education. They serve as volunteers, driving handicapped children to and from classes, donating for classroom equipment and actually assisting in classroom situations. They also make things .... and I think in the making of braille cards and touch boards and typing material in large type for the partially seeing child, they come very close to understanding the problems of the children involved.

Once they reach this point, there is no stopping them. Some of our clubs earn $400 and $600 scholarships. But there are small clubs that put great efforts into large projects for the cause of special education. For example, one club, with only 16 members, has contributed $800 in the past two years.

We have tried, in Illinois, to make the scholarship fund a dedicated work rather than a drain on club treasuries. We have accomplished this by involving club members in classroom situations and by helping them to understand why specially trained teachers are needed.

For the future, we can hope for even more money .... more service from our clubwomen. I believe they can take a more active part in recruitment activities, perhaps on career days in high schools. I would also like to see a corps of trained clubwomen from every part of our state who are equipped to speak knowledgeably on the subject of special education when it is impossible to secure someone from the field.

It is my theory that clubwomen, with their volunteer work, play an important part in all communities of the United States. I believe our way of life would be very different without the volunteer worker. I believe also that clubwomen, unprofessional as they may be, can play a part in the field of special education.

Mary J. Houde, Junior Dir., Ill. Federation of
Women's Clubs, Kankakee, Ill.

CONTRIBUTIONS OF AN EDUCATIONAL PROGRAM IN A PSYCHIATRIC HOSPITAL

Franz Huber

Introduction

Children who are eventually admitted for in-patient treatment to a psychiatric hospital are granted to be the most severely disturbed among emotionally handicapped children. In most cases prior to admittance to in-patient status numerous recourses to a variety of therapeutic measures have been attempted with little or only partial success. Many times deterioration has continued under various forms of stop-gap treatment procedures and the only final recourse is in-patient admission.

It is realized that removal from the home constitutes varying degrees of trauma for the children admitted, but, for many this is a welcome relief from pressures and stress that the child's ego cannot withstand. It must be understood that only children who are virtually impossible to help on any other basis, either due to the severity of their pathology, or due to the extremely distorted climate within the home, are considered for in-patient treatment.

These children present a wide variety of disturbing symptomatology which become increasingly evident in the home, school, and in society. In all cases, even though the children present marked deviation from so called "normal" patterns of development, they will at certain times, in certain areas of ego functioning, and under ideal conditions be able to function in more or less appropriate ways.

Though the incidence of these children not benefiting greatly from previous public school attendance is high, as evidenced by achievement measures, this does not preclude their learning under a markedly contrasting educational design. Work with disturbed children has demonstrated that given an optimum educational framework the great majority make substantial gains in many areas of school oriented tasks.

The school is regarded as an integral functioning member in the milieu treatment center. The other members of the milieu treatment team are psychiatrists, psychologists, psychiatric social workers, psychiatric nurses and attendants comprising the ward staff, occupational therapists, and recreational therapists. The child's daily life centers around school, ward activities, psychotherapy, occupational therapy, recreational therapy, remedial reading therapy, and an extra-curricular club program. The child is seen by the psychologists for diagnostic evaluation generally prior to admission and if warranted, a repeat psychological is given during his hospitalization. One of the criteria for admittance to in-patient status is a commitment on the part of the parents to accept "casework" with the psychiatric social workers.

Educational History and Profile

The initial task of the educators is to ascertain the child's educational history and the educational profile. The child's educational profile is prepared from data obtained through individual testing generally on the second or third day after admission. Areas measured are oral reading, sight vocabulary, silent reading -- vocabulary and comprehension, arithmetic -- fundamentals and reasoning, spelling ability and language skills. General behavioral characteristics and reactions to academic material are noted at this time; motivation, degree of anxiety, attention span, frustration tolerance, resistive techniques, and task involvement, to mention but a few.

From an interview with the child it is important to derive his perceptions of school and school teachers. In regard to the child's perception of his behavioral difficulty in school prominent in many cases are defensive manuveurs such as denial, projection, reaction formation, and bravado -like facades of disconcern. A wide variety of revealing responses are obtained by asking the child how he perceives himself functioning in specific subject areas of reading, arithmetic, and spelling and comparing his responses with his actual performance. The replies will vary from fairly accurate self appraisal to the twelve year old chronic aggressive child saying he's doing "O. K." in reading (actual performance at second grade level) and the overly conscientious child feeling his performance is sub par when he's a grade and a half above his grade level. ---- A child's more realistic acceptance of his academic deficiency is the cornerstone on which progress can be achieved. ----

Criteria for Group Placement

Much of the child's adjustment and extent of profit from the school experience is dependent on the classroom group in which he is placed. When dealing with an age range from four to fifteen years of age numerous factors have to be considered aside from planning for a nursery through beginning high school curriculum. Grouping by pathology has received considerable attention but no definitive studies regarding homogeneous or heterogenous grouping has been forthcoming. The former has been substantiated in specific instances by emperical evidence where small number of hyperagressive, authority resistant, negatively school conditioned boys are placed in one group. This has a positive side effect in that it decontaminates the remaining classroom groups but, nevertheless, someone is needed to teach the "contaminated" group. This someone has usually been a male teacher who provides a fairly rigid, highly structured, semi-routine-like classroom atmosphere and program with emphasis on basic skill acquisition. Limits are of necessity clearly defined and consistently enforced with the authority role embodied in the teacher. This teacher must possess among other qualities the ability to withstand and control repetitive overt and convert testing of his position and a quick reactive sense of humor used judiciously to avert many minor disruptive situations.

Heterogeneous pathology grouping obtained results in one situation where due to discharge only two of the hyper-aggressive boys remained in the group. Their interactive pattern was such that it was clearly not feasible to attempt school oriented tasks. Three other boys were added to the group and their generally positive orientation toward school was sufficient to counter-balance the negative influence of the two original members. The whole group has since been consistently oriented along academic lines.

In consideration of grouping procedures, academic achivement and chronological age should be kept as homogeneous as possible. This aids both the teacher in planning curriculum as well as giving the child a sense of cohesiveness in the group. Segregation on the basis of sex is not generally recommended with the exception of older hyper-aggressive boys who would find it difficult to function with females in their midst. This has been amply illustrated when female student teachers are assigned to such groups. The number of disturbed children who can feasibly be maintained in one group varies considerably with the individual pathology represented, the reactions among the members, and the degree of learning disability prominent in the group. Recognizing the highly individualistic school programming required by these children, eight has been a commonly considered maximum. Speaking from the point of view of teacher satisfaction and emotional well-being, groups of five to six have been considered ideal.

The final factor to be considered in regard to grouping lies not within the group itself but in the individual differences found among teachers. Even experienced teachers vary in their effectiveness in working with various types of disturbed children. Some work best with passively-dependent children, some with anxiety ridden sexually impulsive children, others with vague, bizarre, internally stimulated children, and still others with omnipotent, hedonistic, aggressive children. At times, under ideal conditions, it can be arranged to have teachers work with predominantly those children with whom relationships can be most readily established and maintained.

The Teacher

While psychotherapists explore the child's unconscious and preconscious processes, the teacher works largely with the child's conscious ego functions which are certainly, at times, influenced by unconscious motivations. One of the teacher's primary roles is to nurture that portion of the ego which remains intact and which attempts to cope with the external reality. The teacher is in a position, due to her extensive knowledge and understanding of the child's inner life and performance capabilities, to provide learning experiences in which the child's "attempt to cope" will not be frustrated or result in additional failure.

In order for the child to meet the normal stresses and demands of any classroom situation the teacher has to provide continual, though varying degrees of emotional support. The empathic feelings of the teacher are communicated both verbally and non-verbally in situations where the child has reached the "blow" stage as well as when he is struggling to control his frustration. Even though the child will at times require dispassionate physical removal from the classroom, verbalization regarding incidents and feelings leading up to the crisis can clarify the child's self involvement. For many disturbed children their awareness as to the reasons for removal, rather than resorting to projection of blame on the teacher, is of crucial importance. ----

An important goal with these children is an improved or more realistic self concept. When the teacher is instrumental in creating greater impulse control, better frustration tolerance, higher degree of motivation, consideration of longer range goals, and greater acceptance among the peer group, the child's self image is bound to be more acceptable. A trap in which teachers of severely disturbed children are too often waylaid is in the area of extremely reduced expectations. This applied in the realm of the child's learning, his behavior in class and in social interaction. When the expectation is low, often these children will only be too glad to accommodate. The result will be in chaotic classrooms, disregard for learning, and contempt for the adult. Expectations cannot be beyond their reach but they must be high enough so that when they are attained, often with tremendous supportive investment by the teacher, a real feeling of accomplishment will be realized and any resulting praise will not have that hollow ring accompanied by the child's small voice saying "I only half tried."

Before leaving the subject of the classroom teacher's role, one more area needs brief mention. ---- The teacher needs to be the organizer, the initiator, the stimulator. Learning materials need to be abundantly available to give occasional variation to routine. The teacher with thorough understanding of the physical sciences, natural sciences, social studies, literature and English, coupled with the actor's skill in presenting these areas at children's comprehension levels, will have less difficulty with control problems than a teacher not so prepared. ---- Learning can be made exciting and intriguing only if the teacher has full command of the subject matter areas as well as all of those factors mentioned before.

Individual Remedial Help

The role of the educator in a psychiatric setting includes providing remedial individual tutoring for all in-patients and a considerable number of out-patients who are in need of this service. This need averages from about 40-50% of the in-patient population in reading disability alone. Concommitant with reading disabilities are often found arithmetic retardation even though the latter is in a substantial number of cases present singly.

In cases of severe learning disability the diagnosis of causal factors, the evaluation of the express difficulties in the particular learning area, the establishment of a positive working relationship between tutor and child, the establishment of a set for learning through positive motivation, and the structuring of the learning situation according to the child's dynamics, are all influential in determining the success or lack of success of the remedial operation. ----

Remedial tutoring has a definite contribution to make. Since most of the sessions are individual in nature, the child finds it easier to admit lack of knowledge and inability of performance in the presence of only the adult rather than in a group setting. Removal of the necessity for covering up inadequacies leads to the child's greater acceptance of his problem and more constructive measures to overcome it.

Situations have arisen where it is advantageous to have closer than usual cooperation between the child's classroom teacher and remedial therapist. In instances where a child is advanced in his classroom grade beyond his performance capabilities for purposes of motivational ego bolstering the educational design, timing, and planning has been so arranged that the child receives individual instruction in classroom assignments just prior to entering class. This pre-educational lift enables him to function more adequately on a par with classmates. Besides making him less anxious in the classroom situation the peers present added encouragement with their amazement at his new found ability.

The Team Approach

One of the advantages in teaching in a psychiatric facility is that the teacher is not "holding the bag," so to speak, in isolation, but is a member of a professionally efficient operating team. In certain specific instances this can be viewed as a detrimental factor as when treatment techniques conflict among the members or when children with high manipulative skill are able to bring about discord, but, in the large majority of situations positive factors outweigh the negative. One outstanding example of positive benefit that can be cited occured among all the personnel involved with four young autistic girls in the hospital on a long term basis. These vague, bizarre, unpredictable, aloof children, proved to be frustrating, unrewarding cases, tending to dry up staff motivation and optimism after only a few months of intensive effort. When this situation became recognized the staff immediately involved with these children formed a study group for the express purpose of learning more about all aspects of autism in children. These weekly meetings in which the various disciplines share information, compare techniques, express frustrations, and present pertinent journal articles have altered staff morale considerably. Group support among the individuals has to a certain degree compensated for the insurmountable enormity of the rehabilitation task with these children and, not so surprisingly, under these conditions, the girls appear to be making greater progress. Some have graduated from the nursery program into a 1st and 2nd grade academic program and the others are receiving individual tutoring in basic skill areas in addition to a continued nursery school experience.

The teacher in this type of milieu center is in the position to know how the child is faring in all phases of his development. Bi-weekly meetings with the child's psychotherapist are mutually profitable. Events transpiring in school and psychotherapy can be interrelated and the combined picture provides greater understanding.

Teachers, occupational therapists, and recreational therapists meet daily to discuss similar or differential patterns of behavior expressed in each area by particular children. Some children act out more of the difficulties in a less structured O. T. setting than in school but this is at times seen in reverse.

What transpires during weekends spent at home to make Fridays and Mondays particularly difficult days for the child is learned from the social worker. Progress of the parents in understanding their contribution to the child's personality problem is of paramount concern especially when the projected goal is,with most of these children, a return to the family.

Especially good communication and cooperation is needed between school teachers and ward personnel. With the head nurse acting in many respects as the parental surrogate it is essential that she reinforce teacher recommendations regarding the child's school difficulties. If the educational design for a particular child states that school assignments not completed during the class session be completed during free time in the ward, it is important that this stipulation be carried out. ---- The "boxing in" principle is effective with cases of extreme school negativism, impulsive behavior, and lack of concern about the consequences of their actions. One boy did well in every area of the milieu except school. In school he instigated disruption among the others, continually acted the clown and was persistently obnoxious to all concerned. After the trial of many procedures, nothing of which worked, the decision was to hinge all participation in other activities on his performance in school. If at any time he was removed from school, which was frequent initially, he was to forfeit all participation in milieu activities for a twenty-four hour period; being confined to his room. Soon, after testing out the firmness of this design, he began to meet his responsibilities in the school situation. He has since returned to public school and has done surprisingly well meeting his new responsibilities.

The establishment of any educational design for the individual child which is different from the usual approach requires express communication to all disciplines. Their cooperation in maintaining the agreed upon design on a twenty-four hour basis is of crucial importance. It is necessary for the child to perceive an action as being made on a joint basis with the agreement and support of all disciplines concerned. Only then can the full impact of the milieu be realized.

Extra-Curricular Activities

The school program can also be influential in providing extra-curricular activities for the children. In the setting described, the school offers participation in various clubs. Normally, four to five clubs are operative during any one period of time. Those that have been especially successful are reading clubs, model club, music club, photo club, science club, and language club. These are presented on a voluntary participation basis since it is felt that children should have opportunity to make choices. It was surprising to learn how many children with reading difficulties voluntarily joined reading clubs. Activities in this area consisted of the following: reading, written and oral reports, making up plays, presentation of plays, units on foreign cultures, foreign dinners replete with costumes of the country and representative foods cooked by the children themselves, reading and word games, records, illustrating of stories, etc. No wonder their conditioned responses to reading began to undergo a change. Considerable positive carry-over has been observed in the classroom, on the ward, and in assigned reading therapy.

Model club was founded on the premise that all boys enjoy assembling of model boats, cars, and planes but that many disturbed boys have not been able to get involved in these activities on their own. Also, it was hoped that there would be conceivably increased motivation in reading when faced continually with written instructions and directions as to how to proceed. ----

Just to mention briefly functioning in the other clubs; music club -- folk singing with guitar and children supplying percussive effect with a bongo drum, tamborine, maracas, and rhythm sticks; photo club -- a Q. R. converted into a darkroom with contact printer and enlarger donated by staff -- usually one or two older boys are able to handle the complete photography sequence on their own, taking the picture, developing the film, and production of contact prints and enlargements; science club -- children preparing and performing science experiments in collaboration with the instructor; language club -- initiation and exposure to a foreign language via conversational methods.

Progress Assessment and Liaison with Public Schools

The educator in an in-patient treatment center is in a focal position when considerations are being given to the advisability of discharge. This is doubly so when the plan is to return the child to the home and to the public school. The educator's job is to assess the prognosis for readmittance to the regular public school classroom. The prognosis depends on two primary aspects -- the behavioral patterns established in the hospital school and the level of academic functioning attained by the child. If, as in the majority of cases, the above determinants have been considerably altered for the better since the time of admission, plans are then made for communication with the public school personnel. Occasionally, school staff will recommend additional time to get the child over the "hump" so that his adjustment to public school will have better chances of success. It is virtually impossible to predict conclusively the child's reactions in a new setting since so many factors are operative; namely the strength of the new teacher, the classroom group's reaction and on the home front the child's reimmersion in the family constellation.

It has been found that of crucial importance in the child's readjustment to public school is the degree of liaison and communication with public school personnel. In addition to a comprehensive written school report which the public school receives, the established procedure has been to have direct contact between hospital personnel and public school people. In certain instances public school personnel, consisting of the principal, teacher, and visiting teacher find time and means to visit the in-patient facility in order to discuss the child they will receive. Most often, however, the child's teacher, psychotherapist, and social worker travel to the public school. Considering that in-patients come from all parts of Michigan the venture is costly but, nevertheless, deemed necessary in most cases. When the time comes for discharge even the children now ask "when are you going to visit my school."

These conferences have shown public school personnel to be especially willing to help and "do the best they can" with the child. Once communication lines have been opened there can be an easier flow of information or requests for additional assistance, should conditions so warrant. Discharge from the hospital should not imply termination of contact if the psychiatric team can provide continued valuable assistance.

Training

The psychiatric hospital school has another vital role to perform. With the advent of continued expansion by the public school into special education programs for disturbed children, the demand for specially trained teachers will of necessity increase. Adequate student teacher training programs are therefore of vital concern if the public school wishes to place qualified teachers in these positions. Even if these teachers upon graduation go into regular public school teaching positions they are better suited to recognize and aid the disturbed child within the confines of the regular classroom. All student teachers exposed to such a training program are not going to possess the skills of initially organizing and planning for a special class within the public school, but a considerable number have even been asked to do this and have proven themselves capable of it.

In addition to the student teacher program which turns out anywhere from 4 to 5 specially certified teachers per semester, a summer institute for teachers already on the job was organized. These teachers were either having increased difficulty in handling disturbed children in their regular classes or they had been selected by administration to teach special classes the following year. Teachers entering this program are intensely interested in the hospital school facilities, the programming, the inter-relationship of disciplines, the psychoanalytic concepts regarding children's disorders, and the techniques used in working with these children in a school setting.

The psychiatric hospital school with its highly trained staff is in a favorable position to supply experiences and answers so desperately needed by teachers unfamiliar with the problems of educating disturbed children.

Research

One area of operations only recently receiving considerably more attention is the general problem of research. In a discipline where the primary focus has been on therapeutic educational treatment of the child as number one in importance, the training program for interested personnel as a close second, research has inevitably been neglected to the tertiary position. Some work has been done in this area. Children's perceptions of public school teachers have been contrasted with their perceptions of teachers in the psychiatric setting. Learning rates of children first in public school and then in the psychiatric school have been studied. A factor analysis of disturbed children's reading errors and their relationship to pathology is soon to be available. Many smaller scale studies are being done by teachers in an attempt to validate particular procedures in use.

Conclusion

The school within a psychiatric hospital performs a variety of functions all aimed at providing the disturbed child greater accessibility in meeting the demands of public school classrooms. The severely disturbed child does possess attributes that enable him to adjust to a highly individualized educational design such as can be offered in a psychiatric hospital school. With considerable time, effort, and thought, these attributes can be extended, modified, and restructured so that they encompass the greater part of what is called "normal" behavior and thus enable the child to be returned to society and the public school.

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THE GUATEMALA RESEARCH AND TRAINING CENTER IN REHABILITATION AND SPECIAL EDUCATION

John E. Jordan

The training center in rehabilitation and special education at Michigan State University can be understood only with reference to the context in which it operates. The charter of the college of education in international education entitled: The College of Education and World Affairs - A Statement of Policy and Posture, explicitly outlines the philosophy of international involvement of Michigan State University and the College of Education. ---- In accordance with this philosophy, Michigan State University is devoting attention and effort outside the United States to the three world areas of rapid and significant change: Africa, Asia, and Latin America. However imperfectly, the principle of colleagueship is being applied in these areas. The College of Education demonstrates its commitment to the principle of colleagueship by its conduct internationally and domestically, within the University, among the various educational agencies of Michigan and surrounding states, and in activities overseas.

This means that the College of Education, while it serves primarily the people of Michigan, is obligated and enabled through its contributions to the profession of education, to serve the people of the nation and of the world. This means further that in order best to serve the people of Michigan, the College of Education must escape provincialism, and must so broaden its outlook as to internationalize itself. To do so, it must broaden its programs and its clientele.

In addition to its primary objective, therefore, the present condition of the world and the economic, political and educational interdependence of the world require that the education profession accept these purposes as its own:

1. to bring education to bear directly upon the problems of hunger, ignorance, bigotry, prejudice, and peace, by focusing the activities of educational agencies upon them;

2. to influence the course of society so that change (which seems inevitable) will be directed along desired lines, anticipating the ethical problems raised and building knowledge upon a foundation of moral responsibility;

3. to promote pan-humanism as a basis upon which conflicts between peoples' differing values may be resolved without resort to violence or bigotry;

4. to promote social mobility, assuring the availability of free public education to all persons commensurate with the ability, interests and needs of each; and

5. to develop persons capable of "cultural leadership," conceiving and conducting educational programs that will prepare individuals to act effectively for desired cultural change.

On April 25, 1961, a proposal was submitted within the college of education entitled: An International Research and Training Program in the Vocational and Educational Implications of Rehabilitation and Special Education. This proposal stated as its purpose the development of an administrative vehicle for conducting research and other activities in the international field. The program desired to concern itself with research matters in the three geographical areas within which Michigan State University is now working: Latin America, Africa, and Southeast Asia.

Purposes of Program in Guatemala

1. To provide a center for United States and Latin American students and university staff to research significant problems in rehabilitation and special education.

2. To conduct the kinds of research and demonstration projects that will exemplify or foster good educational practices and rehabilitation procedures.

3. To create a vehicle that will enable professional people of different nationalities to work together on a common cause.

4. To foster a climate for cooperation of United States and Latin American universities on common research interests.

5. To promote through inter-university cooperation, ultimate hemispheric research cooperation in the cross-cultural implications of special education and rehabilitation.

Examples of Types of Research

1. Survey of practices and/or needs in rehabilitation and special education.

2. Incidence statistics per disability area.

3. Cultural meanings of disease and disability.

4. Psycho-social meanings of disease and disability.

5. Studies of specific problems such as space perception in the visually impaired.

Plan of Program: The basic plan is to provide an educational program that will enable United States and Latin American students and staff to research significant problems in their professional field of rehabilitation and special education.

It is proposed that studies at Michigan State University, with research and service activities in a Latin American Center, comprise the primary elements of this program for graduate students. Professional staff from Michigan State University or Latin American nations may also conduct research in the Center.

Initial Step of Proposal: It is proposed that the program be initiated in Guatemala, C. A., between the University of San Carlos and Michigan State University. The rationale for the step is outlined below.

A Michigan State University faculty member visited the University of San Carlos on March 14 to 23, 1961. During this time he attended the first Inter-American Conference on Work for the Blind being held in Guatemala City. This conference was attended by most of the nations of the hemisphere including the following: Argentina, Bolivia, Brazil, Canada, Chile, Columbia, Costa Rica, Ecuador, El Salvador, United States, Federation of West Indies, Guatemala, Haiti, Mexico, Panama, Paraguay, Uruguay, and Venezuela.

It is obvious that such a conference would foster increased interest in work for visually impaired people in the Western Hemisphere. One of the recommendations of the conference was to establish a training center for "Workers for the Blind" in Guatemala City and in San Paulo, Brazil. This recommendation, while officially quite separate from the present proposal, evidences the cultural and professional approval of Guatemala City as a leader in rehabilitation and special education.

The Michigan State University staff member also engaged in deliberations with the appropriate department heads, Dean of Humanities and Rector of the University of San Carlos. The outcome of these deliberations was extremely positive. The Rector of the University desired to start the research program in rehabilitation and special education as soon as possible. The program is briefly outlined below:

Program Elements

1. It is proposed to initiate a doctoral (Doctor of Philosophy) level training program in International Rehabilitation and Special Education.

2. Latin America and North American students would be enrolled in graduate work at Michigan State University for a period not to exceed two years for the purpose of acquiring basic skills in the following areas of study:

    a. Rehabilitation (including vocational, independent living skills and educational aspects.)

    b. Special Education (including blind, deaf, crippled, mentally retarded, speech impaired, and the socially maladjusted or emotionally disturbed.)

    c. Research

    d. Latin American studies

        e. Spanish, Portuguese or English

3. At the completion of two years to study, the North American students would go to the University of San Carlos (Guatemala) for two years of research and service in appropriate rehabilitation laboratory studies.

4. At the completion of academic work, Latin American students would return to Guatemala for doctoral research which would be supervised jointly by the Michigan State University staff coordinator of the program and the University of San Carlos staff.

Research and Service Aspects of Program (at University of San Carlos)

1. During the first three months in Guatemala, the Michigan State University students would attend the University of San Carlos to study the culture, language and rehabilitation problems of Latin America.

2. Remainder of the two years

    a. work half-time on their own doctoral research

    b. work half-time with the University of San Carlos, and/or personnel of agencies and schools in the field of rehabilitation and special education in problems of the blind, deaf, crippled, et cetera.

3. A terminal seminar and examination would be conducted by Michigan State University and San Carlos faculty before recommendation for conferring of the degree.

Present Status or Accomplishments of Center

The present status and accomplishments of the Center for the Study of Education in Central America, within which the center for rehabilitation and special education is contained, can best be defined by listing the series of activities or university contacts which has brought the Center to its present stage.

1. In March, 1961, the writer attended the first Inter-American Conference on Work for the Blind in Guatemala City, Guatemala. At this conference he was able to visit with staff members within the university, the Dean of the Faculty of Humanities, and the Rector of the university. He was also privileged to visit with the cultural affairs officer of the American Embassy who gave encouragement to the project.

2. Following the visit of the writer to Guatemala, the University of San Carlos of Guatemala sent two of their staff members, Dr. Guido Barrientos and Mr. Arturo Lemus to Michigan State University in June 1961. During this stay they conferred with officials of the College of Education and the International Program Division of the university relative to the possibility of establishing a joint center between Michigan State University and the University of San Carlos. Initially the center was to be in the area of rehabilitation and special education but during this visit the concept of the center expanded to include the field of education in general.

3. The writer returned to Guatemala under a grant sponsored by the cultural affairs division of the U. S. Department of State in October, 1961 for six weeks. During this stay specific plans and relationships were developed for initiating the Center for the Study and Improvement of Education in Central America. During this six weeks the dean of the College of Education and the dean of International Programs of Michigan State University both visited Guatemala to confer with appropriate

university and governmental officials.

4. Following the visit of the Michigan State University deans to the University of San Carlos, Dr. Guido Barrientos, who had been designated as Director of the center for the University of San Carlos, and Miss Elisa Fernandez, chairman of the department of psychology came to Michigan State University for approximately one month in November and Devember, 1961. During this time a document of agreement was developed which outlined in considerable detail the areas of concern of the two universities, as well as the organization and administration of the center. During this visit the principal of the school for the blind in Guatemala City, Miss Isabelle Galvez, also visited Michigan State University for approximately one month. She spent most of her time working at the Michigan School for the Blind which is within two miles of the university.

5. In March, 1962, Dr. William Farquhar and Dr. David Payne spent approximately one week in Guatemala initiating procedures for the development of a research project in the cross cultural aspects of motivation.

6. A trip is being planned the first week of May for appropriate Michigan State University officials to return to Guatemala and to sign final papers and documents for the initiation of the Center and to work on a specific contract for funds to support the Center.

7. Dr. William Farquhar and Dr. David Payne are scheduled to return to Guatemala in the middle of May to gather data on the motivation research project. Following this visit they will also gather other data in Puerto Rico.

8. The writer is also scheduled to return to the University of San Carlos for the summer of 1962 for approximately two and one-half months. During this time he will be teaching a course on the psychology and education of exceptional children. He will also be working on the development of the entire Center for the Study of Education.

9. Two doctoral students, John Toth and Daniel McAlees, went to Guatemala in January, 1962, for two years. During this time they will conduct research for their own doctoral dissertation as well as spend approximately half of their time working in a combination position of graduate assistant at the university and providing services to various rehabilitation and special education agencies in the city.

10. Three Guatemalan students are presently at Michigan State University working on their graduate degrees under the present program.

11. A limited amount of financial assistance has been furnished to the University of San Carlos to conduct research on needs in the field of secondary education.

Future of the Program

It is contemplated that the program will develop into a graduate Regional Center for the Study and Improvement of Education in Central America. The universities of Central America have reached agreements whereby each university will be designated a regional graduate center in some field of higher education. The University of San Carlos has tentatively been designated as the Center for Education.

It is also planned that several additional students will be at Michigan State University by September, 1962, from Guatemala as well as Nicaragua, Honduras, El Salvador, and Costa Rica.

It is also contemplated that the Center in Guatemala will open doors to the possible exploration and establishment of such a Center in South America. It is further hoped that the Center in Guatemala will give impetus within the College of Education at Michigan State University for the establishment of such a Center in Africa and in Southeast Asia.

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CREATIVITY AS IT IS RELATED TO UNDERACHIEVING AND OVERACHIEVING GIFTED ELEMENTARY CHILDREN

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The study I am reporting on today is one aspect of a larger study on factors associated with underachievement and overachievement of intellectually gifted children. conducted by the Department of Special Services in the Champaign, Illinois public schools. This research is one of the special study projects for gifted children partially supported by state funds under the provisions of House Bill 58 of the Seventy-First General Assembly of the State of Illinois.

Problem

In recent years, considerable emphasis has been placed on the importance of fostering the development of creativity among our youth. Authorities in the field of the gifted include creative ability as one of the outstanding characteristics of the gifted. One would logically conclude that a certain level of intelligence is necessary for creative intellectual endeavors. We would conclude that there is greater creative potential among that segment of our population classified as the gifted than among the general population. On the other hand, we recognize that the individual intelligence test which is considered the best single instrument for identifying the intellectually gifted child does not sample all aspects associated with excellence. The traditional intelligence tests do not seem to measure all of the intellectual processes, notably that of creativity.

It is only in recent years that researchers have been studying the nature of creativity, how to measure creativity, how to cultivate creativity, and the relationship of creativity to other facets of behavior. There have been numerous studies investigating the causes of underachievement among gifted children and several studies on underachievement and overachievement among the gifted. Few studies have used elementary age pupils as subjects. Still fewer have studied creativity as it relates to achievement. To my knowledge, the relationship of creativity to under and overachieving gifted pupils, prior to this study, has not been explored. Since intelligence appears to be only one factor that accounts for differences in achievement, the Champaign study investigated the relationship between achievement and certain other factors among which is creativity which is the aspect of the study I am reporting on today.

Subjects chosen for this study were gifted pupils at the fourth and fifth grade levels who were markedly underachieving and overachieving. It was felt that a better understanding of the relationship between creativity and achievement among gifted children could best be gained by studying differences between subjects representing the two extremes in achievement.

Theoretical Orientation (Karnes, 1961)

From a theoretical point of view, a high degree of creativity may favor academic success for the following reasons: (1) the creative pupil is able to think of a greater number of possible solutions for a problem and thus is more likely to succeed; (2) the creative child has a greater feeling of confidence in his ability and he is more willing to try a new task; and (3) the creative child is better able to evaluate the quality of his efforts and this adds to his skill in persisting at a task until he is successful.

Successes in school may foster a high degree of creativity on the part of the pupil because: (1) school successes encourage the feeling of realistic self-confidence and the pupil feels more willing to try to cope with any new task; (2) successes in a school setting which requires a variety of approaches for solutions provide the pupil with a realistic background of experiences in problem solving which adds to his skill and anticipation of eventual success; and (3) the pupil who is academically successful is more assured of his status and thus is better able to concentrate on the task at hand.

From this theoretical viewpoint involving the relationship between achievement and creativity of intellectually gifted children, it was hypothesized that overachievers would score significantly higher on tests of creativity than their underachieving peers.

Selection of Subjects

Subjects were drawn from the fourth and fifth grades of two large elementary schools with a total school population of 900 located in white middle class socio-economic neighborhoods. The preliminary screening was made on the basis of the results of the California Test of Mental Maturity, California Achievement Tests, teachers ratings using as a guide a check list of characteristics of the gifted, and the Binet Vocabulary Scale. Two hundred thirty-two gave indications of having above average intelligence. These 232 pupils were administered the 1937 Revised Stanford-Binet Intelligence Scale, Form L. One hundred eight pupils were found to have intelligence quotients of 120 or higher. Achievement expectancies for each of these 108 subjects were obtained by averaging the Horn Formulas corrected for expected achievement in the areas of arithmetic and reading. The Horn Formula takes into consideration the correlation between reading and intelligence. These formulas also take into account life experiences of the child rather than assuming that a child should be working on an academic level commensurate with his mental age.

The 108 potential subjects were administered the California Achievement Test which allowed for the previously ascertained level of expected achievement. Individual grade placement scores in the areas of arithmetic and reading were then averaged to obtain an average grade placement score for each pupil. Average grade placement scores were subtracted from expected achievement scores to obtain the achievement discrepancy score for each pupil. The achievement discrepancy scores were plotted for each of the grade levels (4th and 5th grades) and pupils whose achievement discrepancy was -1 sd or lower were classified as underachievers (a total of 21) and those whose achievement discrepancy was +1 sd or higher were classified as overachievers (a total of 20).

Characteristics of Subjects

The underachievers and overachievers did not differ significantly with respect to CA, socio-economic status, or race. There was, however, a significant difference in IQ between the over and underachievers. The variances of the two groups on the IQ measure also differed significantly at the 5% level with the underachievers possessing the largest variance. However, an approximate *t* test revealed that irrespective of the significant difference in variances, there was still a significant difference between the mean IQ's of the two groups. This difference was significant at the 5% level. The mean IQ of the underachievers was 142.05 while for the overachievers it was 131.48.

Measuring Instruments

Two tests of creativity were modified by Wollersheim (1960) from those developed by Guilford (1950) and were used in this study to measure creativity. These tests measure three specific aspects of creativity -- fluency, flexibility, and originality.

The first test entitled the *Unusual Uses* test contains such items as "A milk carton is usually used for holding milk. List all of the other things for which you might use a milk carton." This test is scored for two factors -- a fluency factor and a flexibility factor. The fluency has to do with the number of acceptable uses for the object. The flexibility score indicates the number of different uses according to classifications given for the object.

The second test, the *Consequences* test, contains such items as, "What would happen if there were no mirrors in the world?" The responses for which credit is given are scored either as obvious or remote responses. The obvious score reflects ideational fluency and the remote score is an index of originality.

The assumption behind the fluency factor is that the larger the number of ideas produced by a pupil in a given period of time, the greater his chances are of producing superior ones. The rationale so far as flexibility is concerned is that to be creative a person must be able to change his set, branch out and try new approaches and new avenues of thought.

Originality is defined in terms of unusualness or cleverness, or novel. The logic to obtain measures of originality is that the pupil must be able to think of something new or different to be creative.

The scoring reliabilities of the creativity tests used in this study were high. Three judges scored independently the tests and the correlation coefficients were all in the .90's. Split-half reliabilities of the test scores corrected by the Spearman-Brown Formula ranged from .71 to .80 for the various scores. These test score reliabilities appear to indicate that the tests were fairly consistent in the measurement of the general abilities associated with them.

Results

There were significant differences between under and overachievers on three of the four scores obtained from the creativity tests. The overachievers scored significantly higher on the flexibility score of the *Unusual Uses* test and on the obvious and remote scores of the *Consequences* test. There were no significant differences between the two groups on the fluency score of the *Unusual Uses* test although the achievers tended to display a higher performance on this measure. One tailed parametric *t* tests were used in analyzing all of the creativity test scores except the remote score. In this case a one-tailed non-parametric Mann-Whitney U test was employed because the distribution of the scores on this variable deviated too much from normality to render the use of a parametric technique practical for analyzing the data. There were no significant differences in variance between the two groups on any of the test scores.

Discussion

The hypothesis that gifted overachievers are more creative than gifted underachievers was supported by the findings of this study. Overachievers scored significantly higher than their underachieving peers on the flexibility score of the *Unusual Uses* test and on the obvious and remote scores of the *Consequences* test. The flexibility score reflects the ability of an individual to spontaneously change his set in thinking and to branch out into new channels of thought. This is important in creative thinking in that often an individual must break away from certain thought patterns and explore new directions if he is to produce a creative idea. The obvious score reflects an ability termed ideational fluency. This ability is defined in terms of the number of ideas an individual can produce with regard to a given topic in a specified amount of time. This is associated with creative thinking because a person who produces a larger number of ideas, other things being equal, has a better chance of producing a significant idea. The significantly better performance of the overachievers on these two scores imparts some interesting information about the creative thinking of gifted under and overachievers.

In this study overachievers tended to produce more ideas on a given topic in a specified period of time than did their underachieving peers. It appears that the experiences and knowledge that overachievers have accumulated through the years are more readily available to them and are in a more useable form than those of underachievers. The overachiever appears more adept in being able to draw upon his experiences to help him solve newly presented problems. He seems more effective in his ability to render past experiences and learning more meaningful by being able to apply aspects of them to new situations. Then, too, as revealed by the flexibility score, overachievers displayed better ability in branching out into new channels of thought than did underachievers. Hence, the data of this study show that overachievers are not only more fluent in their approach to new problems but they are also more flexible. The overachiever appears freer from perseveration in his thinking and more adept in being able to change his perceptive when examining a problem. The underachiever, on the other hand, not only produces fewer ideas in problem solving situations, but his ideas are more likely to be concentrated around one particular aspect of the problem. He is not as adept as the overachiever in spontaneously changing his set so as to be able to approach a problem from many different aspects.

The remote score of the Consequences test is a measure of originality. Taken into account here is the concept of novelty so intimately related to creative thinking. Here, too, overachievers scored significantly higher than underachievers. Hence, overachievers not only produce more ideas and show more flexibility in their thinking than do underachievers but their thinking is also characterized by more originality. Of the two groups, the overachievers were better able to produce ideas that were remote from the situation presented but yet intimately connected with this situation and relevant to it. On the other hand, the ideas produced by the underachievers were mainly obvious types of responses that the average individual is more likely to see when examining the situation. The underachievers produced some remote responses indicative of originality but their performances here were inferior to that of the overachievers. It is interesting to note that not only were the overachievers superior to the underachievers in producing remote responses indicative of originality, but they were also superior to the underachieving group in their production of obvious responses reflecting ideational fluency. Thus, it appears that overachievers are superior to their underachieving peers both in their ideational fluency revealed by their ability to see obvious relations in regard to a situation and also in their originality revealed by their ability to pin point remote and more distant relationships.

Ideational fluency is the ability measured by the fluency score of the Unusual Uses test. Here, too, the overachievers displayed a higher performance than the underachievers but the difference between the two groups did not reach statistical significance on this test. But as already discussed, the ability of ideational fluency was also measured by the obvious score of the Consequences test and here the overachievers manifested statistically significant superiority to the underachievers.

This study, then, supports the hypothesis that overachieving gifted children are more creative than gifted underachievers. The findings show that they are superior in three main types of abilities that Guilford and his associates (Wilson, Guilford, Christensen, and Lewis, 1954) found involved in creative thinking. These abilities are referred to as fluency, flexibility, and originality.

One interesting and reassuring implication of these findings on creativity is that the overachievers who are so highly regarded by our schools and teachers as the fine examples of what education can do, are the same individuals who manifest superiority on other independent criteria of excellence different from those traditionally used in educational settings. In this research, overachievers displayed superior performance on the independent criteria of creativity measures. Possibly the curricula and goals of our school systems are not as narrow and rigid as some are prone to believe. It may well be that the type of training youngsters receive in school is not as inflexible and impractical as it is sometimes looked upon, but rather is highly related to success in areas other than the strictly academic one. However, this is not to say that creativity or other types of abilities could not be developed and fostered better by curricula that specifically set out to accomplish this.

Then too, these findings pointing to overachievers as being more highly creative than underachievers are consistent with the descriptions of these two groups found in the literature. It appears logical that the underachiever depicted in the literature (Gowan, 1957) as a youngster who withdraws from intellectual competition devalues himself, and defensively holds to goals below his potential, is less creative than his overachieving peer who is often pictured as a youngster challenged to vindicate himself (Goldberg, 1958) and who consequently holds to high aspirations and is strongly motivated and ego-involved in intellectual activities. Just as school achievement is a kind of intellectual performance, so, too, creative thinking is a kind of intellectual performance. This research points out that the overachiever who performs so well in the intellectual area in school is the same individual who manifests superior performance in the intellectual area of creative thinking. Correspondingly, the underachiever who appears to withdraw from intellectual challenge in school and who consequently manifests inferior performance in academic areas tends to follow this same pattern in the area of creativity where his performance is inferior to that of his overachieving peer. In regard to the underachiever, Gowan (1957) says:

> "Initial attempts at creative accomplishment may not have been seen by others as 'worthwhile' but only as 'queer' or 'different'. The blocking of this avenue of rewarding behavior by others, tending as it does to reinforce his often over-critical appraisal of the disparity between his goals and achievements, may blunt his work libido, stifle his creativity, and consign him to a routine of withdrawal and escape as the most tolerable method of insulating his ego from hurt in an alien and disinterested world."

Various investigators (Goldberg, 1958; Findley, 1959) have pointed out that emotional maladjustment may also be found among overachievers. However, these youngsters appear to react differently to the emotional situations which they encounter. Researchers (Barret, 1957; Flieger, 1957) have noted that while under-achievers tend to lower their level of aspiration and withdraw from intellectual challenge, achievers tend to meet their problems more realistically by coping with their environment. It appears that the overachiever is challenged to vindicate himself and he thus embarks upon a course of seeking to prove his worth and adequacy.

Research investigating the relationship of personality variables to creative ability and under and overachievements seem promising of rendering valuable information as to possible reasons why over and underachievers may differ in creativity.

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BEHAVIORAL CHARACTERISTICS OF THE EMOTIONALLY DISTURBED CHILD

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Addressing a multi-discipline audience is always a challenge and I have found it a pleasant one. The body of my remarks will be directed at the various ways in which disturbed behavior is manifested. I will discuss autistic and symbiotic psychoses, autistic-like behavior, the brain damaged child, the aphasic child, the psychiatric implications behind certain speech and language phenomena, and lastly the neurotic child. Neither physicians nor teacher must be content to say, "This child is emotionally disturbed" and let it go at that; for, more precise understanding of the type of disturbance permits a more precise teaching approach, as well as a tailor-made direction to psychotherapy, when this is indicated.

But, before turning to the main discussion, experience underscores the value of clarifying terminology, and delineating some basic concepts. To begin with, a word of caution about thinking, as someone put it recently, that we are supposed to "differentiate between the organic and the emotionally disturbed child" or be inadequate to our professional responsibilities. This statement implies that the patterns of emotional disturbance in the organic child, that is the symptoms, are ipso facto different from those of the non-organic, or functional child. In reality most often they are not. Small wonder there is difficulty in differentiation! Symptoms such as repetitive behavior, hypersensitivity, poor memory and nervous mannerisms are valuable only in a descriptive sense and do not point per se to organicity or to functional causes. The child's physiological functioning obviously must be known. To what extent can he hear, see, talk, walk? What is his innate physical strength? Do the neurological and psychological examinations reveal unstable and [illegible] immature neurophysiological functioning? It is only when the medical information is available, in addition to the description of behavior, that attention can then be directed to the matter of differentiation. For the problem is to differentiate not the organic child from the non-organic child but the origins of the disturbed behavior. To what extent is behavior (a) directly attributable to the organic factors, or (b) induced by environmental or intrapsychic stresses? For example, repetitive, which is to say perseverative, behavior may be understood as the result of a physiological inability to bind energy, that is to inhibit the particular act. On the other hand, it may be anxiety-determined even though the child already has an organic predisposition to be repetitive. It is perhaps because the organic child frequently has both the primary cause and additional environmental causes for his abnormal behavior that so many people are unclear how to differentiate the organic from the so-called emotionally disturbed child. This discussion hopefully should put their worries to rest. It is and always will be unclear, because there is no "either-or", nor, as we have implied above, is there an entity called the emotionally disturbed child but, rather, a particular type of emotional disturbance existing in a particular type of biological substrate to form a particular child.

The psychiatrist looks for the roots of the disturbed behavior through assessing the role of many factors; to wit: the constitutional (or inborn traits such as aggressive and dependent drives); the physiological; the psychological; the cultural; and the organic pathology.

Let us talk now about the term "brain damage" and consider brain damage to mean youngsters with objective neurological disorders (such as primary mental retardation, cerebral palsies, dysarthria, sensory and motor aphasias, focal and generalized epilepsies) and along a continuum, including those children with no demonstrable organic pathology whose difficulties are sometimes explained as due to "maturational lag" (Bender). These are the children with so-called "soft" signs of brain injury such as mixed dominance, poor fine motor movements, and varying degrees of immaturity in speech, auditory and visual patterns. Actually the present diagnostic tools as well as our understanding of the biochemical processes of the central nervous system are so limited that there is no one designation which fits this latter group of children, although the term "sub-clinical organicity" is the most descriptive I have encountered. (Smolen).

Turning now more directly to the topic of this paper let us begin with a description of these children with sub-clinical organicity as they constitute a significant group in special education classes today. The child, usually a boy, establishes his reputation as a classroom discipline problem around the age of five or six. (He may have had a trial period in a nursery school or kindergarten but after a hectic week or so he was probably sent home as being too immature for that group experience.) Although he appears to be a bright, attractive, intelligent lad, he is failing in school and may be retained again this year. In the third grade, if he has not already been excluded, he is disruptively aggressive. He runs and does not walk in the halls. His shoelaces, zippers, and buttons once undone remain untied, unzippered and unbuttoned until standards of decency and orderliness are finally reestablished by weary adults. His pockets bulge with small objects with which he fiddles all day. He is frequently humming, making odd noises, or talking to himself. In playgound activities, he is something of a bully. He appears to be completely devoid of even a rudimentary sense of fair play or the existence of rules. He screams like a frightened two year old if he cuts his finger but when the kick ball lands on the roof of the school building, he shinnies up the side, retrieves the ball, slides down the drainpipe and jumps the last five feet.

He likes fans and motors. He rarely has friends but never lacks accomplices. He loves ritual, marching, and making up elaborate rules, and he would give his immortal soul to be a member of the school patrol but he is unable to read the patrol pledge or if he can, he is unable to remember it. On occasions he explodes into violent temper tantrums or apparently unprovoked rage reactions of such violence that he constitutes a danger to himself or others. These are the children Dr. Laurette Bender has in mind when she talks about an organic basis for childhood schizophrenia.

The aphasic child is to be differentiated from the above group if the basic problem is a deficit -- not an immaturity for whatever reason of speech and language. This is not easily established by neurologic, anatomic, or etiologic approaches. As Kleffner of the Central Institute for the Deaf points out, "Our own experience is that one of the best sources of reliable and useful information upon which to base differentiation and classification, is the child's response to diagnostic teaching." By this he means a structured and organized set of procedures for teaching language.

From the psychiatrist's point of view, the aphasic child's responses to his environment will largely be determined by his age, the degree of deficit, and the emotional stability of his environment. The younger he is, the easier it will be to convey love and acceptance to him by non-verbal means. But as he attempts to develop his personality including his self concept, the greater his sensory isolation, the more distorted is his picture of the world about him. He may be literally out of contact and appear psychotic. Without specialized teaching and other remedial methods, aphasic children are predisposed to an autistic, which is to say psychotic, way of life. The timing of this regression will naturally depend upon the extent of sensory deprivation and other factors.

Perhaps the most interesting and difficult behavior to understand as well as to alter, is what we label autistic. All autistic children are psychotic but not all psychotic children are autistic. A few words about childhood psychoses in general are in order before continuing further with the description of autistic behavior. Some psychotic children may drift into fantasy life when overstimulated by the intense mother-child relationship. They are particularly responsive to the parent's, usually mother's every mood and degree of anxiety to such an extent that they seem to have no identity of their own. It is as if they are contiguous with the mother, and the name symbiotic psychosis is often applied to these children (Mahter). These days, psychiatrists usually do not attempt to differentiate types of childhood psychoses because of our limited knowledge and the all-pervading reality that the personality structure is still so fluid as to defy clinical classification.

An autistic child is remote from people, preferring balls, toys, buttons, etc. He uses people but does not involve himself emotionally with them. They could literally fall dead at his feet and he would walk over them if his purpose was to reach the other side of the room and they were in his path. If he wants the faucet turned on and can not reach it himself, he will appropriate one's arm and direct it to the basin. He is mute. He may sit still until physically moved by someone, but is more apt to be in constant, aimless (it would seem) motion, frequently rocking back and forth or fingering for hours his clothing or a toy. He may not eat well but usually does so. As a psychotic child, out of touch with his environment, he does not belong in a school but in a treatment program, preferably residential.

However, there are children in school who show so-called autistic-like behavior. They will acknowledge the presence of other people and interact with them for various periods of time. They can attend to school work in varying degrees and often have adequate speech and language. Their outbursts are unpredictable. These children are noteworthy for their high degree of egocentricity and when in contact, for their Napoleon-like ordering about of their environment. They resist normal physical contact. There are varying degrees of autistic-like behavior. Such children are difficult to label. They may be on their way in or out of an autistic (sometimes interchangeable with the designation schizophrenic) illness.

They are to be distinguished from the children who have many of the same characteristics but who are warm, even though exasperating. The latter may withdraw but with a built-in attitude of "come and get me." They have temper tantrums which build up gradually and thus they give out warning signals of their irritability and/or anxiety. These children can be reached with patience, firmness and understanding much more easily than the child with autistic-like behavior. They "manage," though with difficulty, to maintain friendships. Their parents are frequently discouraged but do not experience the despair as known by parents of the non-relating, apparently indifferent child.

Autistic and autistic-like behavior may or may not have an organic basis for fixation at such a regressed level. Research has yet to clarify the cause or causes in those cases which do not demonstrate a physiological, which is to say organic, reason for the child's isolation from his environment. However, the fact that autism yields so seldom to intensive remedial efforts points in the direction of organic determinates. When considering the etiology of autistic-like behavior, it is easier to see the genetic importance of emotional, which is to say psychological, factors.

To derive these factors, of course, the multi-discipline team including diagnostic teaching when the child is of school age, is charged with evaluating the presence or absence of (1) organic components, (2) psychological abnormalities, and (3) the interrelationships of (1) and (2). The chances are that many of the troubled children in your classroom must be understood in these terms. Their emotional problems develop as a result of organic limitations set in a life situation which was already disturbed or has become disturbed by their pathology.

Children who are emotionally disturbed often have symptoms in the speech and language areas. They are among the most interesting to understand psychologically. But our first task is to establish to what extent organic speech defects are present. Following that not always so easy a job, the psychological significance can be discussed as follows. Speech may be blocked out of deep anxiety or inhibited on the basis of neurologic factors or both, to varying degrees. Usually the child provides the answer because he will use speech and language appropriately under what for him are non-stressful conditions if the causal factors are emotionally determined. He may do well at home but not at school. If at school, he may speak out only in a one-to-one relationship -- sometimes only when in a small group.

The emotionally disturbed frequently use speech as a defense in relationships with others. For example, a child may speak in a vague, noncommital way indicating his distrust of the adult's response. He may rush his words together so as to camouflage his thoughts and feelings, which he anticipates will prove unacceptable to his listener. His sentences may be left unended for much the same reason. But we are more familiar with the use of speech and language to reflect the intensity of emotional conflicts and sometimes the nature of the emotional disturbance. The stutterer, for example, is frequently to be understood as attempting to check the expression of hostility. The mute child may be using silence to provoke anger from his parents or teachers and thereby obtain the punishment he feels he deserves. Other children are selectively silent, reflecting an idiosyncratic trait of withholding and/or withdrawal. Non-speaking may also be a bid for attention where, as the child sees it, other efforts have failed.

The verbose child may be using the oral rather than the motor pathway to express either his anxiety or his aggression, or both. Excessive speech frequently is an example of the saying the best defense is to take the offense.

Non-verbal behavior accompanying the silent or verbose child is an integral part of his behavior pattern. Facial expressions, body postures, the direction of his visual gaze, and his geographic position within a group are examples of meaningful non-verbal behavior. These remarks apply, of course, to all types of behavior.

Perhaps a few words about the anxious child are in order before closing. The chief task here is to recognize healthy anxiety which motivates a youngster productively, and to be familiar with normal developmental needs and achievements at each age level. With such a background, the neurotic child is not too difficult to identify. When the anxiety is overt, there is even less difficulty. Such a child will demand constant reassurance, encouragement, and usually speaks of his fears. When his anxiety is not "free-floating" but covert, it is handled by such mechansims as (1) dissociation as with daydreaming, (2) projection -- where whatever it is, it is somebody else's fault, (3) somatization -- meaning that he has physical complaints which are emotionally determined, and (4) repression, of which academic underachievement is a most common example.

And thus we see by the above description we have completed the circle, for these last remarks apply to the brain damaged children, the aphasic and the autistic children as well, -- all of whom have many anxieties depending upon how aware they are of their handicaps and, in good part, upon their feeling of acceptance by school, home, and peers.

In conclusion: one approach to understanding a child is through describing his behavior but we must keep in mind not to overestimate or to underestimate behavioral data. Nor do we wish to prematurely label a child. It is essential to obtain medical and psychological information. When this is integrated with the observational data, it allows us to evaluate the nature of the emotional disturbance whose roots may include in various combinations a medical component, a psychological symptom complex, and a special learning disability. Identification of the components allows us to build a tailor-made remedial program. We can then hope that adequate facilities are available in our communities to implement our selective approaches to each child with an emotional disturbance. But that is another story, and another paper.

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DIAGNOSIS AND REMEDIATION OF LEARNING DISABILITIES

Samuel A. Kirk and Barbara Bateman

Disabilities and disturbances in learning processes have been of interest to various professions. The medical professions, especially neurologists, have been concerned with finding physiological and structural correlates of specific learning disorders. Pathology in particular brain areas have been related to certain disabilities.

While the medical specialist is concerned with the relation between communication disorder and the location of cerebral dysfunction in children, the special educator is concerned primarily with assessment of the behavioral symptoms and with designing the special methods of remediation required to ameliorate the disability. Since it is often difficult to determine whether or not there is a cerebral dysfunction except by inference from behavior, the educator is concerned primarily with behavioral symptoms or deficits rather than with the location or extent of brain damage. The knowledge of whether a reading disability, for example, is caused by an injury to the angular gyrus or to some other brain area does not usually alter the remedial procedures. These are determined by the behavioral symptoms, not the neurological findings.

In planning remediation for a disability, whether it is a learning problem, personality disturbances or whatever, a classificatory label, such as paranoid schizophrenic, EMH, or dyslexic is of relatively little value. The process of finding an appropriate label is *classification*, and must be distinguished from *diagnosis*, which should lead directly to specific remediation or treatment.

Dyslexia, e.g., is a classification, a label meaning that the person has difficulty in reading. A dyslexic may in fact have a lesion in the angular gyrus, or had his handedness changed, or perhaps his father did reject him. But none of these kinds of analyses tells us what to do to improve the reading of our particular subject.

Our interest is in the kind and extent of diagnosis that leads directly to a formulation of what should be done about the disability. Classification by itself may be of academic and theoretical interest and value but it does not contribute greatly to ameliorating the disability.

While there are a substantial number of children who are delayed or retarded in learning to talk, read, write, spell, or do arithmetic, not all children with these problems are considered to have learning disabilities *per se*.

A *learning disability* refers to a retardation, a disorder, or delayed development in one or more of the processes of speech, language, reading, writing, arithmetic, or other school subjects resulting from a psychological handicap caused by a possible cerebral dysfunction and/or emotional or behavioral disturbances and not the result of mental retardation, sensory deprivation, or cultural or instructional factors.

Quite a bit is known about learning disabilities in the area of reading and the kind of diagnosis we have been discussing can be illustrated by describing the steps in diagnosing a reading disability.

The first step is to determine the child's capacity for reading. Mental age, arithmetic achievement, and years in school are among the factors used in estimating this reading capacity. Next, actual reading achievement is determined, and the discrepancy between the capacity for reading and actual achievement in reading is examined.

The processes of reading are analyzed to determine the symptoms of poor reading which are present and to fully describe the way the youngster approaches reading. Method of word attack and types of errors made are but two important aspects of the reading processes which must be fully examined.

The fourth step is to study related disabilities in the child to determine why he failed to learn by the normal procedures. Mixed dominance or laterality, poor auditory fusion or sound blending ability, difficulties in visualization, visual memory and closure problems, and so forth, may provide important clues to the disabilities underlying reading failure. The last step, and a most vital one, is the recommendation or planning of specific remedial procedures and techniques, based on a knowledge of the child's disabilities, and designed to correct the faulty patterns of reading.

For the past several years interest at the Institute has been concentrated on the development of a "scientific pedagogy" in the area of learning disabilities in language or psycholinguistic functions. A "scientific pedagogy" in this field requires (1) the development of behavioral diagnostic instruments of such a nature that the specific disabilities can be differentiated and identified, (2) validation of these tests by research studies, and (3) determination of the educability of psycholinguistic disabilities through longitudinal training of a select group of children.

At the present time the experimental edition of the Illinois Test of Psycholinguistic Abilities is itself being extensively "tested." The clinical model for the ITPA is related to Osgood's generalized language behavior model and Wepman's model for aphasic disturbances.

In a sense, the model represents one way of breaking down into separate parts the language functions of what is sometimes called the "black box." We are not concerned with disturbances or deficits due to sense organ problems. ---- Assuming the sense organs are intact, in normal language users auditory or visual stimuli are understood or decoded. Right now as you listen you are doing auditory decoding. As you look at the slide (not given here) you are doing visual decoding. As I am verbally expressing ideas, I am doing vocal encoding. Were I to express an idea by gesturing I would be doing motor encoding or expressing.

Deficits may occur in a single psycholinguistic ability, or in a combination of several. If a child shows several areas of deficiency we must try to determine which deficits or deficit are basic and design remedial procedures to remedy that disability.

We are presently engaged in diagnosing and doing remedial work with youngsters who have learning disabilities in psycholinguistic functions. ---- MW was placed in a class for hard of hearing children because of his apparent inability to hear or understand. However, audiometric tests revealed no hearing loss whatever, so he was returned to the regular grades and from there he was later placed in an EMH class. Binet and PPVT scores have been consistently in the 60's and 70's, while his WISC performance IQ's have been 100 and 93. At the time of initial diagnosis he could read only a few words. His average reading grade or four tests was 1. 5.

His ITPA profile revealed wide discrepancies between the auditory-vocal channel and the visual motor channel. He functioned like a five-year-old on all auditory-vocal subtests except encoding while he was above norms (+ 9 years) on visual decoding, vocal encoding, and motor encoding.

Specific remedial exercises in each of the areas of deficiency were undertaken, as was remedial reading. He is now reading at a 3.3 grade level (higher than his mental age) and shows no signs of having reached a plateau. The post-remediation ITPA profile shows gains in the auditory-vocal areas of deficiency.

This case offers a specific illustration of the way in which our research design, utilizing an N of one, operates. For each child a diagnosis is made and the hypothesis evolved is that "X" kind of remedial treatment will bring about certain results. Careful testing is done before and after "X" treatment and detailed records kept of the exact nature of the treatment. Each child's "pre-training" performance is the "control." Since no two children have exactly the same difficulties, an N of one is the only research design possible at this time, although just recently we have found several sibs who have highly similar disabilities and are now training one of these sibs with the others serving as controls.

New hypotheses are continually being evolved and tested, e.g., MW showed no gain in visual-motor sequential abilities and it was hypothesized that the phonic (auditory-vocal) method of remedial reading used with him does not improve this ability and that a switch to a visual-kinesthetic approach would do so. This is now being tested.

While it is too soon and our cases too few to be sure, there is some evidence that remediation of psycholinguistic functions in older children (9-10 and up) does not produce IQ changes, but may do so in younger children.

One other case in which remediation was not undertaken, but which illustrates the use of the ITPA in the diagnosis of learning disabilities, is drawn from a study of partially sighted children.

SL is a third grade boy enrolled in a special class for partially sighted children (Binet IQ of 139, CA 9-0, MA 12-6). He has a very mild visual defect (hyperopia, visual acuity 20/30 in each eye) and evidenced no visual difficulty in any tasks. His reading grade level scores were: Oral, 1.9; Silent, 3.3; Word Recognition, 2.2; Word Discrimination, 2.6; Average Reading Grade, 2.5. He is an unusually bright boy who is reading about four and one-half years below his mental age. His reading comprehension score is about a year above his other reading scores, a not uncommon finding with bright children. His ITPA shows that in spite of the fact he had no visual channel problem, his visual-motor sequential score was very low, as were his scores on both encoding (vocal and motor expression) tests.

SL shows a severe disability in visual sequential memory, i.e., in the ability to remember in order what he has seen. In addition he shows some difficulty in the area of encoding (expressing himself vocally or by gestures). A careful analysis of his reading process revealed that he tends to omit unknown sounds and words.

At this point we may hypothesize that a deficit in visual sequential memory was the primary cause for his initial difficulty in learning words, and is therefore the disability that must be remediated. Since we know that he is weak in expressive functions, the fact that his lack of reading skills showed up as omissions of sounds and words (rather than as added sounds, reversals, consonant errors, etc.) is quite consistent and almost predictable.

An appropriate remedial program for SL would be based on the diagnosis above and primarily directed toward teaching him to remember visual stimuli in a given order and toward facilitation of both vocal and motor expression of ideas. A visual-kinesthetic program of remedial reading instruction would be ideally suited to SL since it would develop both visual sequential memory and motor encoding (viz., writing). Since SL is very bright it would be appropriate to begin teaching him words (by a systematic visual-kinesthetic method) at a relatively high vocabulary level. When a word like "astronaut" has been learned, vocal encoding (expression) can then be encouraged and "trained" or developed by an active discussion of concepts surrounding the word. For example, SL might be asked to describe an astronaut's space suit in as much detail as he can, enumerating characteristics, etc.

A battery of tests of psycholinguistic abilities has been described. The test is presented, not as a classification instrument, but as a diagnostic instrument which leads to clues for remediation of deficits in various psycholinguistic functions found particularly among cerebral palsied, brain-injured, and some emotionally disturbed children.

The Illinois Test of Psycholinguistic Abilities does not make any assumptions with respect to neurological or neurophysiological correlates of behavior. Its emphasis is on assessing behavior manifestations in the psycholinguistic field, in relating the assets and deficits to a behavioral (not a neurological) model, and in extending this type of behavior diagnosis to a remedial teaching situation. It is recognized by the authors that there may be more than nine functions and that further clinical and basic research is needed before we arrive at a more complete diagnostic procedure which will lead to definite and prescribed remedial methods. Ultimately, when this stage has been reached and we are able to demonstrate that programmed instructions can ameliorate, if not remove, specific deficits in children, we will have arrived at what Alfred Binet tried to accomplish in his procedures of "mental orthopedics," which he described in his classic report on the "The Educability of Intelligence."

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AMERICAN FOUNDATION FOR OVERSEAS BLIND

Paul J. Langan

Present Program and Plans for the Future

Actively engaged in supporting the programs for the blind in 42 countries last year, AFOB provided a wide range of services in both the fields of education and rehabilitation. To effectively coordinate such a world-wide program of assistance, AFOB maintains regional offices in Paris, Manila, and Santiago (Chile) staffed with experienced consultants who spend the major portion of their time in the field. Through this method of direct personal contact, it is possible to gain first hand knowledge of the needs of any particular country requesting aid in the development of its program of services to blind people. In addition to these short, on-the-spot surveys, AFOB provides long-term professional consultants to implement the establishment of approved plans for new schools, teacher preparation courses at local universities, and experts in the field of rehabilitation and job placement. Interesting projects of this type were carried out last year in Malaya where at the request of the Ministry of Education, a college level instructor-consultant was posted for a three year assignment to prepare local teachers for the integration of blind children into the regular public schools along with the sighted students; in Uruguay, where a rehabilitation consultant went to assist with the development of a new training center; and in Macao, where an AFOB staff member from the Manila office, starting from scratch, completely designed, had constructed, and planned the program of training for the first such facility in the Colony which was opened on May 28, 1961 with a capacity of fifty blind trainees, most of whom are refugees from the mainland of China. Another important phase of the AFOB program is to provide scholarships for advanced study in this country and the U. K. for top-level local educators and rehabilitation administrators. Opportunities for this type of grant were furnished to applicants from Poland, Uruguay, and the Philippines among others during the past year. The great need for special appliances, materials, supplies, and equipment is another significant area of service provided by AFOB. Recent instalations, involving large quantities of braille equipment, tools, and machinery, were made in 1961 to Portugal, Vietnam, Pakistan, Uruguay, India, and Colombia, as well as shipment from the U. S. of a school bus to the school for the blind in Asuncion, Paraguay.

In looking ahead, plans for the current year indicate an increasing amount of services and assistance to the ever-growing number of newly emergent and under-developed countries requesting help in setting up programs of education and rehabilitation. One new country falling into this program of expanded services is Okinawa, where on February 13, 1962, AFOB posted a rehabilitation counselor borrowed from the California program for a short survey type of assignment. Firm requests have also been presented by the Governments and Ministries of the Philippines, India, Pakistan, Austria, Poland, Spain, Greece, France, Brazil, Chile and Colombia for educational or rehabilitation consultants in the coming months. Funds have been budgeted for these requests, all of which we hope to satisfy, although the recruitment of a number of highly qualified experts and their release from important duties in this country poses difficult problems. Applications for scholarships and equipment are being processed for the coming year and will undoubtedly exceed the grants made for these items last year. Major requests for technical equipment being considered for this year are braille presses and stereotypers for the Phillipines and Ecuador, and extensive teaching aids in the form of braille writers, embossed maps, and mathematical appliances for the teacher preparation courses scheduled to be undertaken this term. The most significant expansion planned for the current year is the opening of the fourth AFOB regional office in Beirut, Lebanon, scheduled for June 15, 1962, to better serve the newly independent and lesser developed countries of the Middle East and North Africa.

Cooperation of Voluntary Agencies

Maximum use of U. S. voluntary funds could be achieved by joint agency approach to rehabilitation projects in certain countries where such centers are practical. Determination of this type of multiple program should be made on the basis of the country's ability to eventually take over and support the facility. Though not a hard and fast rule, our general policy has been to anticipate turning over the complete financial and professional operation of a newly established facility within a maximum of three to five years. Under normal conditions, this should be sufficient time to provide for the training of local staff, both on an in-service basis and abroad, and to fully organize the program of services to be offered. Before undertaking the establishment of any type of educational or rehabilitation program within a country, the voluntary agency should secure a definite commitment from the receiving government or agency for the continuation of the facility at the termination of the specified period of international assistance. Such good intentions are occasionally impossible of performance by the local government due to frequent changes in the ministries and unexpected economic failures, as we all know. This should not, however, eliminate the efforts of the voluntary agencies in their attempts to gain local, public, civic, and government support of the needed services.

Joint Action by Government and Voluntary Agencies

It is with pleasure that we have recently been able to discern an increased awareness by certain departments and agencies of the U. S. Government of the remarkable impact that can be made on social development and public opinion abroad through the allocation of dollar or counterpart funds for research and service projects relating to the rehabilitation of the handicapped, including the blind. It is our firm belief that such action should be broadly expanded, particularly within the programs of AID, and that the closest possible cooperation and coordination should exist between the Government departments and those voluntary agencies which have maintained international assistance programs for many years. The great reservoir of voluntary experience and talent could thus be utilized for the selection, preparation, and administration of those priority projects which will produce maximum benefit with a minimum of fund wastage. We are convinced that other voluntary agencies, in addition to our own, would warmly welcome the opportunity of extending advisory services or administering designated projects on a contract basis.

We cannot speak too highly of the great benefit that has already been derived by the handicapped, including the blind, through the operation of the International Rehabilitation Research Program of OVR. We at AFOB are grateful for having been privileged to work closely with Miss Switzer and the members of her staff in the selection of certain projects. Similarly, we have recently established similar relationships in the operation of projects for the rehabilitation of the blind, with the Refugee Migration Unit of the State Department and the Department of the Army. We trust that this trend will rapidly be broadened to include other departments and agencies of the Government.

Relationship to International Governmental Organizations

Another avenue of joint cooperation is available to the voluntary agencies through the joint sponsorship of rehabilitation projects with other international agencies. The forthcoming commemoration of World Health Day in April, 1962 will be entirely dedicated to the prevention of blindness, and rehabilitation of the blind. Voluntary agencies throughout the world in the field of blindness have been called on to work with WHO and their governments in focusing attention on the subject. The March-April issue of the Magazine, WORLD HEALTH, will be entirely devoted to this theme. Like WHO, many other international agencies have an interest in and a relation to rehabilitation. The voluntary agencies might well find it compatible, therefore, to share in the development and operation of educational and rehabilitation programs abroad with ILO, UNICEF, UNTAA, CARE, AKF, and other organizations well known to the field of international aid.

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INTERNATIONAL ACTIVITIES OF THE OFFICE OF VOCATIONAL REHABILITATION

Joseph M. LaRocca

The Office of Vocational Rehabilitation has been involved in international activities since 1947. These activities have been carried on with other nations and in cooperation with the United Nations and its specialized agencies; the International Cooperation Administration, now the Agency for International Development; the Department of State; and numerous voluntary organizations, such as World Rehabilitation Fund, the International Society for the Rehabilitation of the Disabled, and the American Foundation for Overseas Blind.

Rehabilitation Research

Since August, 1960, OVR has conducted a program of financial support for the conduct of rehabilitation research abroad, with American-owned foreign currencies accumulated from the sale in foreign countries of agricultural surpluses under Public Law 480. For 1961, $930,000 was made available for this program; $1,372,000 for 1962, and $2,000,000 is included in the President's budget request for 1963. The countries involved in this cooperative program are Brazil, Burma, India, Indonesia, Israel, Pakistan, Poland, UAR-Egypt, Syria and Yugoslavia. To date, 25 projects have been approved and an additional 25 are in the process of development.

All of these cooperative projects are of great depth and scope and are using scientists of outstanding renown to exploit the unique research opportunities in each country and to demonstrate ways for meeting problems of disability.

A number of these projects are directly concerned with the rehabilitation of disabled children. The Children's Orthopedic Hospital in Bombay is conducting research involving severely disabled cerebral palsied children, including those of working age. A similar project in Brazil to prepare the cerebral palsied for employment is being conducted by the Associacao de Assistencia a' Crianca Defeituosa in Sao Paulo. In Israel, Malbin-JDC is carrying on experimental techniques for the assessment of the vocational rehabilitation potential and requirements of cerebral palsied patients to provide a basis for planning community services and facilities directed toward their employment in suitable jobs. In Egypt the Ministry of Social Affairs and Labor in cooperation with the Cairo Rehabilitation Center is investigating methods for the rehabilitation of youths disabled by heart impairments. Additional projects in these and the other cooperating countries are concerned with disabled people of all age groups, including children.

Interchange of Rehabilitation Personnel

In September, 1961, OVR began to implement the additional international research authorities provided by Public Law 86-610, the International Health Research Act. Under Section 4, OVR is authorized, among other things, to arrange for the interchange between the United States and participating foreign countries of scientists and experts engaged in rehabilitation research. Pursuant to this authority, a group of specialists in plastic surgery has been organized to go to the Christian Medical College and Hospital in Vellore, India, in rotation, to advise and help build a broad program for the rehabilitation of victims of leprosy. The work of these specialists ties in directly with a rehabilitation research project previously approved under Public Law 480 by the OVR. Four of these surgeons have already gone to India on this program.

Two United States experts in prothetics and orthotics were sent to Yugoslavia in 1962 to work for two months with outstanding orthopedic physicians and psychiatrists in Yugoslavia on the problems of design, manufacture of components, and the principles of fitting and alignment. Through their efforts, newer materials of lighter weight and greater strength were developed.

We expect to develop exchange opportunities for all of the disciplines involved in rehabilitation.

International Activities Other Than Foreign Currency Activities

OVR has supported a number of rehabilitation activities with funds other than foreign currency. The primary use of these funds is for the study of current status of rehabilitation and rehabilitation research needs in various countries of the world. This includes grants to abstract world-wide publications and reports in the field of rehabilitation; to establish a world commission on research in rehabilitation; to gather and analyze information on technical devices designed for the education, rehabilitation and personal aid of blind persons; and to study attitudes toward mental illness and mental health in diverse cultural and socio-economic settings.

Technical Assistance

For some years OVR has recruited American experts in vocational rehabilitation for temporary assignment by the AID and the United Nations to countries which request this kind of help. Rehabilitation programs in Formosa and Mexico have benefited greatly through the services of such outside experts.

Preparation of Position Papers

Another continuing responsibility is the preparation of position papers on rehabilitation for the use of the State Department and official U. S. delegations to United Nations' conferences. Along this same line, we assisted the Senate Sub-Committee on Reorganization and International Organization in its study of rehabilitation abroad.

Participation in International Meetings and Conferences

OVR participates in international meetings and technical seminars in rehabilitation which do so much to promote the cause of rehabilitation over the world. The most recent of these were the 8th World Congress of the International Society for the Rehabilitation of the Disabled, the 3rd International Congress on Physical Medicine, the 4th Inter-American Conference on Rehabilitation, and the 3rd World Congress of the Deaf.

OVR, the National Rehabilitation Association and the International Society for the Rehabilitation of the Disabled held the Second International Rehabilitation Seminar on March 1 and 2, 1962, in Washington, D. C. This Seminar was called in response to an increasing interest in international rehabilitation among voluntary agencies in the United States. Seminar sessions were informative, educational, and provided for an exchange of ideas and experiences. About 100 voluntary agencies sent representatives to this seminar.

Foreign Trainees and Observers

One of the most constructive aspects of technical assistance is the training of personnel. Since 1947, OVR has planned and supervised training programs for approximately 1300 trainees, leaders, and visitors from 78 countries who have been sent by their own governments, the Agency for International Development, Department of State, United Nations and its specialized agencies, or voluntary agencies. They have come to us from some of the newly-established independent nations such as Somalia, the Congo, and Senegal, from behind the Iron Curtain -- Russia, Poland -- from Southeast Asia -- Burma, Thailand and Malaya -- and from a great majority of the Latin American countries as well as practically every country in free Europe.

Such rehabilitation personnel study and observe the activities of State rehabilitation agencies and get practical experience in voluntary agencies and in facilities throughout the United States. Many of them participate in special rehabilitation courses at universities or study the rehabilitation research and demonstration projects sponsored by this office. An increasing number of these foreign trainees are actively engaged in our international rehabilitation research projects in their native countries.

Publications and Professional Materials.

In all of the underdeveloped countries there is a dearth of technical and professional rehabilitation materials. Each year, at the request of agencies abroad or individuals, from 2,000 - 2,500 technical publications are furnished by OVR for use in development of rehabilitation programs.

Goals

Rehabilitation excellence is not an exclusive U. S. possession. The talents and capabilities of rehabilitation workers and institutions in other lands are a valuable resource. Therefore, we look to expansion of our international activities in the years to come, for we feel that these collaborative efforts, particularly research, will enhance the quality and productivity of our domestic programs. Similarly, we feel that the results of our domestic research will enrich their programs. Finally and most important, we believe that rehabilitation can be a most powerful tool for building understanding among peoples of the world and towards achieving eventual world cooperation.

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SOME CONSIDERATIONS OF FEEDBACK AND NEUROLOGICAL IMPAIRMENT

Margaret C. Lefevre

It will be my purpose to suggest that we may profitably look at some problems as objectively as we consider the circuits of a conceptual model for input, storage in memory, output, and particularly if we are to understand the "whole child" as we are so fond of saying, the condition of his circuitry for feedback.

It is observed by Allport in his latest work, Pattern and Growth in Personality, published last October, that feedback has become a familiar term in modern neurological theory. "It refers to the fact that the end-situation (a response) sends return neural impulses to the brain. These returning impulses discharge in the open pathways, and thus tend to maintain in circular fashion (or slightly modified fashion) the system that is operating."

The strategic importance of feedback function is recognized by Mowrer in his most recent book, Learning Theory and Behavior, where he says, or was saying in 1960 when the book was published, "In other words, behavior is a continuous, on-going function of the informational feedback from all senses, internal and external; it is, in a word, a function of the total psychological field."

A General Feedback Theory of Behavior has been developed by Powers, Clark & McFarland in a 2-part monograph, which describes and provides the rationale for a conceptual model. They say in Part I:

> "There are two major classes of feedback in common knowledge. One is the type which is wholly internal to a system, involving closed loops which do not cross the input or output boundaries of the system, and the other is the type in which the feedback path exits through the output boundary, passes through the environment (with attendant modification of the information) and reenters at the input boundary, the rest of the loop being completed within the system. Both types of feedback can exist simultaneously, but only the external type is unequivocally perceivable as a feedback loop by an external observer."

We have observed in cases of diagnosed neurological and sensory impairment certain deficiencies and inefficiencies of the feedback circuits. We have learned something from them, and have learned to make certain inferences from the behavior of those without obvious sensory losses or diagnosed neurological impairment.

It must be acknowledged that we have learned pitifully little, in view of the numbers that have been available. As it is my stated purpose to present some considerations of feedback and neurological impairment, it may be in order to present some figures as to incidence of neurological and sensory impairment. Last year the National Committee for Research on Neurological Disorders put out a fascinating booklet published by the Department of Health, Education and Welfare under the title, Exploring the Brain of Man. It contains some estimates that we may regard as about as close as we can come to the actual figures at the present time:

"Neurological and sensory disorders directly affect approximately 20 million

> persons in the U.S. alone! An estimated one out of every eight of us suffers from some such disabilities, ranging from speech defects and hearing problems to disorders causing crippling and death ...
>
> "Several hundred thousand deaths occur each year from neurological and sensory disorders - almost 190,000 from strokes alone.
>
> "More than a million are disabled by strokes; another half million suffer from cerebral palsy.
>
> "A million or more cases of Parkinson's disease are estimated by some scientists.
>
> "More than 8 million persons are disabled by diseases affecting the brain or spinal cord.
>
> "Glaucoma, cataracts, and other blinding conditions have claimed the eyesight of almost half a million persons in the U.S..
>
> "Five million Americans have *serious* hearing problems (italics mine on serious, for we know that a loss which may be calculated as mild in terms of decibels for an adult can be serious for a baby or young child in a critical period of learning.)
>
> "One in every sixteen babies born in the U.S. suffers from some form of neurological disability."

The order of presentation of these figures has been altered somewhat to leave this rather startling statistic until last for the purpose of emphasizing the fact that we already have a forecast of enough problems to keep most of us here busy for the remaining years of our professional careers.

We are already acquainted with some of the names and terms associated with this research, e.g., Norbert Wiener and cybernetics, Mowrer and the conditional responsesm amplifying Pavolv's conditioned responses, Ashby's Design for a Brain (British in origin in 1952) utilized by Powers, Clark and McFarland in their *General Feedback Theory of Behavior*, and their conceptual model of the Homeostat.

Another conceptual model of the past couple of years has been of particular interest in relation to communication. The Upjohn Brain Exhibit and descriptive booklet of *A Moment at a Concert* presents a construct of the circuitry needed for visual and auditory perception and storage in memory of a percept in audition and vision, or a unit of experience in hearing and seeing a woman singing. The booklet opens with a modest "Short Discourse on Perception," and continues through a brief description of the visual mechanism, the auditory mechanism, etc., with photographs of the circuits required for a conceptual model.

It should be noted that the Upjohn model is not so ambitious as to include a feedback mechanism, and that the Ashby Homeostat is not so ambitious as to include such a complex mechanism as that required for a combination of visual and auditory perception. In other words, our conceptual models and computers to date, fabulous as they are, can undertake to demonstrate only a small segment of the functions of the human organism. *But* they do have certain advantages that we should not overlook in providing us with an objective view of certain functions that concern us in our understanding of learning, behavior and communication.

In our present context, let us say that such revelations may be precisely those of science: an objective view outside some of our traditional ways of thinking, previous training which may have conditioned us to speculate on mother-child relationships, etc., and to be relatively unaware of the view from the reverse, usually unnoticed side, or what we may call the circuitry of the child.

It seems worthwhile to labor this point a bit, as many of us have a predilection for assuming in the case of a child with problems that it is the environment which is at fault, that it has somehow failed to provide him with the right kind of stimulation and encouragement. Of course, there is a point here, but the point I want to make is that until we have taken a good look at the organism of the child, we have no way of knowing what *is* the right kind of stimulation and environmental feedback for *him*.

It seems altogether too easy to overlook the fact that there may be something within the child, something amiss with his own particular circuits, making it difficult or impossible for him to respond in so-called normal fashion to even the best of so-called normal environment, including parents, siblings and teachers. To give you an example, while the content of this paper was turning over in my mind, a graduate student wrote a report on a 4-year old boy with delayed speech and said, "It was concluded that too much pressure was being put on this child in regard to his speech," and although the available information provided little support for such a conclusion, this seemed perfectly legitimate to her. The information seemed to me to suggest at least a watching brief for quite a different conclusion with regard to the child himself.

Now, if we regard seriously the figures of the National Committee for Research on Neurological Disorders, and if we take an objective view of children from a position of psychical distance afforded by conceptual models, we may be a little better prepared to face the fact that there are a number of children with problems referable to their own circuitry: that we cannot realistically expect their parents and classroom teachers, however kindly and well-meaning they may be, to be experts in dealing with them in the ways best suited to their peculiar and highly individual needs.

As an example, let me cite the case of a 3-year old girl with cerebral palsy. The degree of the impairment, including mental retardation, did not seem severe enough to account for the delay in her speech development. The parents were intelligent and cooperative, and were also acquainted with developmental habits, as Susie was the third of four children. Naturally, when they were advised to "encourage her" in her speech attempts, they did what they had done with the other children, then did it more intensively when she did not respond as the others had. They were then exclaiming loudly, "Look at or listen to Susie!" clapping and laughing loudly in approval at every sound from her. Poor little Susie happened to be one of those children with long and roundabout circuits for localizing and identifying sounds, and she had a pronounced startle reaction to sudden loud sound, so that instead of being encouraged, she was getting the daylights scared out of her every time she vocalized. Both parents readily saw, when it was called to their attention, that Susie showed a startle reaction to sound that was different from their other children, and they could see the sense of trying to encourage her speech in a quiet way that would help her keep organized in what she was doing.

This was a child with neurological impairment as part of the complex of cerebral palsy. Now let us consider another type of neurological impairment - epilepsy. Petit mal seizures are not uncommon among the children we see in the clinic. A child who has never had a convulsion or Jacksonian type seizure may not have been diagnosed as having frank epilepsy, and there may or may not be a dysrhythmia in brain wave pattern that shows on an EEG. But some of the children who have spells of staring into space for periods of seconds are having petit mals, during which consciousness is suspended. It may appear that they have let their attention wander, but it is important for us to realize that this is not subject to voluntary control. If directions were being given at the time of the seizure, they should be repeated, for the child has not heard what was being said. The duration may vary from 2 or 3 seconds to 15 or 20, and it is very easy to miss at least key words or phrases in that length of time, or to be out of visual contact with flash-cards in reading or arithmetic. The same interruption may be going on in the feedback circuit, preventing the child from correcting possible errors or receiving the message that what he is doing is right.

The psycho-motor seizure may simulate a disorder in perception or feedback. The child who laughs, cries, or has a temper tantrum for no apparent reason, or no environmental situation to call forth the responses, may be responding to impulses set off in his cortex by scar tissue or some other discharging type lesion. This child, too, should be understood as being temporarily separated from the environment, both for input and feedback, by a phenomenon within his own circuitry.

Another type of neurological impairment that presents a problem in feedback is the Parkinsonian mask. Even though the individual may have good intellectual function and be socially communicative, his lack of mobility in facial expression and the characteristic patterning of his vocal expression may make him appear uncommunicative. It is difficult for others in conversation with him to see the person behind the mask and to maintain their normal communicative attitude.

A similar situation exists with an unresponsive child. We constantly tell mothers to keep talking to the child with hearing loss, with aphasia or delayed speech for known or unknown reasons, but we should have some appreciation for the mothers' difficulty in constantly maintaining a one-sided conversation.

These, then, are some considerations of feedback as a mechanism, which I hope will shed some light on the problems we try to solve. It is not my intention to suggest, however, that we should adopt a point of view toward children which is exclusively or essentially mechanistic. In conclusion, I would like to quote a final paragraph from Wilder Penfield in his Epilogue to that remarkable work, *Speech and Brain Mechanisms*:

> "My plea to educators and parents is that they should give some thought to the nature of the brain of a child, for the brain is a living mechanism, not a machine. In case of breakdown, it can substitute one of its parts for the function of another. But it has its limitations. It is subject to inexorable change with the passage of time."

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RECENT RESEARCH ON SCHOOL PROGRAMS FOR THE EMOTIONALLY DISTURBED

Nicholas J. Long

The combined efforts of national, state, and professional groups to sensitize the public to mental health problems in general, and delinquency in specific, via various mass media are beginning to show some positive results. For example, there is a growing awareness that while a small minority of emotionally disturbed children are in special classes, day care treatment centers, psychiatric hospitals, and residential institutions, the vast majority of them are fidgeting, fighting, bitching, instigating, crying, and incidentally, failing in the regular classes in our public schools. This is nothing new to those of us who have worked closely with children, but it is a new fact to the general public who have been exposed to three broad generalizations regarding the education of emotionally disturbed children. These are:

1. Emotionally disturbed children have average or above average intelligence. They are not mentally retarded, or defective children. Unless they can be rehabilitated, their potential contribution to our society will be lost. As a nation, we cannot afford this waste.

2. Emotionally disturbed children usually act out their sickness in a group situation, which in turn affects the interpersonal relations of all children in the class. There is a parental fear that the negative radiation belt emotionally disturbed children generate will leave emotional scars on susceptible children in the classroom, and

3. Emotionally disturbed children consume too much of the teacher's time and psychological energy. This means that the majority of healthy children are being denied instructional time which could have been supplied had these children been removed from the class.

It becomes evident that the way in which a community solves this problem depends upon the values they hold regarding the worth of all children. In some communities the solution is to offer an extensive remedial program, while in other communities the emphasis is to remove these children from the classroom as soon as possible and educate them in the least expensive way, materially and psychologically. Regardless of the attempted solutions, a lot is being done. Parent groups are being formed, programs are developing, and theories and techniques are being advocated. All of this and more can be identified in the wealth of literature published during the last five years. When the literature is reviewed, one will come to a conclusion that the education of emotionally disturbed children is on the move professionally and that soon it will divorce itself from its stepsister role in the field of special education. To support this statement let me list some of the reasons I feel this is true. (1) There is an increase in the number of courses offered in institutions of higher learning. For example, in 1961, 37 institutions of higher learning offered courses on the socially and emotionally handicapped child. I am also aware of at least five other universities and colleges that are considering the establishment of a training program in this area. (2) Every major city in our nation now operates special classes for emotionally disturbed children in the public school setting. While many of these classes operate on a marginal level, the majority of these cities expect to expand their program significantly within the next five years. (3) The majority of states now have bills before their legislators regarding the education of emotionally disturbed children. If passed, they will have a direct bearing on future training and service programs. For example, in the State of Indiana a bill was passed last year providing reimbursement to local communities for psychological services and for the development of special classes in the public schools. (4) During this fiscal year the National Institution of Mental Health is supporting 44 research studies in the area of school mental health. This represents an investment of $1,193,000. Analyses of individual studies show that approximately $1,700,000 is being allocated to studies which deal with emotionally disturbed children. All of this leads me to believe that this field is growing rapidly and that the future looks exciting and adventurous. Somehow this situation reminds me of the story about the three boys who were sitting in the park reading magazines. A policeman observed the situation for a while and then went up to the first boy and asked him what he was reading. The boy replied he was reading the life of Thomas Edison and commented that he hoped to become a scientist when he grew up. Then the policeman asked the second boy what he was reading and he replied that he was reading the biography of Orville Wright and hoped that he could be a jet pilot when he grew up. When the policeman went to the third boy and asked him what he was reading, the boy replied "Playboy" and then the policeman asked him what he wanted to be when he grew up. The boy smiled and said, "Me, I just want to grow up." I believe this story summarizes where we are in the field. There is the pressure to grow up and to accomplish things quickly. What I hope to do in the remaining ten minutes is to comment on some of the current trends and high-lighting some of the apparent areas of conflict.

The references that appear in this field can be divided into three broad categories: (1) Survival articles, (2) Wisdom articles, and (3) Research articles. Survival articles usually describe how a school or agency began a special program, and how after considerable difficulty, confusion, and misery, the program worked. If a casualty occurred, it was usually a teacher who either quit or was replaced after his first month in the front lines. However, the final message of these articles is "we made it -- we survived, thank God -- and we are willing to try it again.

Wisdom articles usually appear after the author of a survival article has tried it again. The article usually consists of a list of conditions and situations to avoid, while advocating certain techniques and methods which have proved to be effective. There is a fair chance that the literature will be flooded by these articles as everyone becomes more of an expert during the next two or three years.

Research articles usually appear after someone has tried out the reported "wisdom" only to find that it didn't work in their situation. Except for the present research project supported by NIMH, there is a genuine lack of experimental studies. Those that are published usually begin with an apology to the reader that many of the important variables were not controlled, but it was a beginning and the best that they could do under the conditions. With these generalizations behind us, let us look at the following eight points or trends.

(1) The first trend is the increased interest in developing more valid methods of identifying and predicting emotionally disturbed children at the earliest possible age. The two major references in this area were written by Eli Bower and Delbert Beir. Bower's method of identifying vulnerable children consists of a series of teacher administered group tests to her class. The teacher is to operate as a suspectician rather than a diagnostician. Bower's method is a real contribution in that it brings to the teacher a simple yet imaginative system for screening children with potential problems. While there is still some question regarding the methodology of the teacher prediction part of Bower's study, the fact remains that many of his findings are significant and that the sociometric techniques he developed warrant intensive study and verification.

Beir's method was to develop a questionnaire to assess the number and types of emotionally disturbed children in the entire State of Indiana. Once again the major source of information was from the schools. With slight modification, this questionnaire might be used as a prototype for other state surveys.

(2) The second trend is the growing community awareness that many alternative school settings are needed for emotionally disturbed children. In the past the alternative for too many disturbed children was either to remain in school, usually on a baby sitting arrangement, or to be expelled and wander the streets until one's delinquency resulted in a state placement. ----

(3) An analysis of the various school settings show a significant interest in special classes in the public schools and in day-care centers administered by psychiatric hospitals or child-guidance clinics. The advantage of these two programs is that they provide a semi-controlled situation, which is similar to many institutions without the consequence of severing significant family ties. Also, they can serve many children without incurring the staggering cost of residential treatment.

(4) Because of the need to develop additional special classes in the public schools, the type of program that is being created becomes the responsibility of the educator, rather than the clinician. It is difficult to evaluate the implication of this trend at this point, although it will be interesting to watch in subsequent years to come.

(5) Too many special classes and programs were begun before the goals were clearly stated and the instructional methods and limits spelled out. Occasionally programs were initiated, as in the New York City experiment, primarily to allay community censure and guilt. The task was to develop various programs immediately even though they resulted in educational confusion, disorganization, and inevitable acting out among the children. We should have learned from the initial failures of EMR (Educable Mentally Retarded) and TMR (Trainable Mentally Retarded) classes that crash programs and naive planning create more psychological damage to the future of this field than no program at all. The trend, however, is to create a controlled community crisis based upon planned surveys of EDC (Emotionally Disturbed Children). This way the schools and professional groups can use the community forces to their advantage rather than be used by them.

(6) The next trend is a negative one. After most special classes have operated

for a year, the director or principal realizes that they didn't spend the necessary time to develop an adequate evaluation study. After five years, they can be heard saying, "Too bad we didn't study learning disorders, or instructional methods, etc., etc., because we had so many interesting cases." ----

(7) The main area of conflict in the literature centers around a difference of opinion regarding teaching methods for emotionally disturbed children. Norris G. Haring and E. Lakin Philips have been advocating the interference method, while Radl, Morse Newman, Rabinovitch and others have been advocating a psycho-dynamic method within a reality setting. The interference method is based on a premise that emotionally disturbed children lack structure and order in their lives and that the teacher's task is to rearrange the learning environment so that structure and order exist. This is accomplished in the following ways:

(a) The reduction of stimuli, (b) the reduction of activity and group participation, and (c) Initial concentration on academic learning. The authors also presuppose that certain positive changes in the teacher-student and parent-child relationship will also occur. From a behavioral viewpoint, the teacher should be clear on his expectations and not tolerate or condone any acting out. For example, the authors make this point in the following quotations, "A good rule to follow is to do at first what you would have to do later in order to get over to the child the consequences facing him. This attitude on the teacher's part saves a lot of time and avoids encouraging the child to play the game of testing the firmness of the educational requirements."

The main assumption of this approach is based upon a belief that educational procedures used with brain-injured children seem to be equally effective with hyperactive, emotionally disturbed children. How do they support this view? Is it based upon evidence, wisdom, or personal wishes? On the surface Haring and Philips give the reader the impression that their method is deeply entrenched in experimental evidence by quoting extensively from two studies. They are the Arlington County Study in Virginia which they directed and the Cruikshank study on hyperactive and brain damaged children in Montgomery County, Maryland. The former study is reported in Vol. 26, in the 1959 issue of *Exceptional Children* and presented in more detail in their book entitled *Educating Emotionally Disturbed Children.* ---- While the study is interesting and merits recognition as a pilot study, the conclusions that the authors make regarding their method is totally unwarranted at this time. It should be mentioned that the interference method gains its major support from Cruickshank's study on hyperaggressive and brain damaged children, where there was absolutely no significant difference between the experimental and controlled groups although the differences that occurred favored the experimental method. The only reasonable conclusion one can make is that the experimental method does not make a significant difference even in achievement. ---- What alarms me about the interference method is that it sounds like an answer to the complex problem of educating emotionally disturbed children. It appears simple, economical, and on the surface, logical. Also, it is appealing to the teacher because the method is consistent with his classical training. ----- My concern, however, is that educators have a tendency to group toward simple and easy solutions. If they do, then they will begin to accept the interference method without putting it to additional experimental tests.

(8) The final point is that after all is said and done, the most important variable in the rehabilitation of children, is the teacher, and that all significant education evolves and revolves around him. Therefore, it is essential that he be free from using his role as a way of resolving his personal problems. This does not mean the teacher should be free of problems. It only implies that teacher training programs in this area are more concerned with what a student teacher *does with his problems* rather than whether he has problems. The emphasis on screening prospective students and in placing them in a practicum early in their training will result in a more dynamic training situation and hopefully attract the more able students.

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CURRICULUM TRENDS FOR THE EDUCABLE MENTALLY RETARDED AT THE ELEMENTARY SCHOOL LEVEL

F. A. McKinnon

In thinking about an approach to this topic, it occurred to me that I would be in no position to undertake a normative survey of current practice, as at least one of my colleagues has been able to do. Therefore, I do not propose to present to you a picture of what is actually happening in terms of curriculum development for the retarded in the United States and Canada. Also, there seemed little to be gained by presenting to you a paper dealing with trends in certain *aspects* of curriculum construction, for this was done by Marguerite Thorsell on this occasion last year, and subsequently given wider circulation in the December, 1961 issue of *Exceptional Children*.

It did occur to me, however, that I might be allowed to crystal-ball a little and talk about what might *become* trends in curriculum by making reference to some significant and recent pieces of research whose findings are bound to affect the nature and direction of curriculum development. ---- Research findings which could bring about some trends in curriculum development can be grouped under three headings:

1. increased knowledge about the mentally retarded generally;
2. increased knowledge about the learning processes of the mentally retarded and the material that is presented to them, and,
3. increased knowledge about the post-school needs of the mentally retarded.

Increased Knowledge About the Mentally Retarded in General

Not too long ago, in educators' perennial pursuit of that will-o'-the-wisp, homogeneous grouping, it seemed that if we could just get the educable mentally handicapped all together that we would be able to do a better job of adapting curricula and teaching methods to their needs. And so we set about assiduously corralling as many 50 to 80 IQ children, in batches of 15 in a room, as we could, all with the hopeful expectation that that in itself might do it.

Unfortunately for our peace of mind and fortunately for progress we now know that even if we should have succeeded in this, we would have had a less heterogeneous population but by no means a homogeneous one. We can now observe that we have in the educable mentally handicapped samples from three or four populations -- the brain injured, the familial retarded, the culturally deprived, and the multiply handicapped -- in varying proportions depending on the nature of our school and its community, and with a great deal of overlapping of sub-groups. And in this we can also observe that a curriculum which will meet the needs of one group is not necessarily adequate to the needs of another.

With respect to the culturally deprived, for example, studies such as Kirk's on the effects of early education of the mentally handicapped, Strodtbeck's ongoing research in Chicago, and the studies which led to the provision of special facilities for the culturally deprived in New York State all suggest that we must think through the needs of this group in particular. And certainly it is clear that what is a good curriculum for a culturally deprived child who is functioning at a retarded level, but who may well develop close to normal intellectual ability, will differ from that for a child who is truly retarded in the traditional sense.

In relation to this may I say that we have long recognized that our familials represent not only limited intelligence but also a limited environment. What we have been slow in recognizing is the degree to which the low IQ's we find may be representative of that environment to a greater degree than of an innate deficiency as such. This is not new.

But I suggest that current evidence places a renewed emphasis on the importance of recognizing such a distinction, and planning school procedures in its light. Certainly we have come a long way since the days of the Jukes and the Kallikaks, and maybe even from the days when definitions of mental retardation stipulated irremediability as a necessary condition. In any case, the role of the school as a community agency is clear, and adaptation of curriculum procedures in recognition of this responsibility is important.

Increased Knowledge About the Learning of the Mentally Retarded

Thinking back on my undergraduate days I well recall familiarizing myself with what were called "the learning characteristics of the retarded." And here again the retarded were all lumped together as one group, of whom it was said they possessed a short attention span, limited ability to generalize or transfer, proneness to perseveration, and -- well, you know the whole bit.

Current research would indicate that while some of these characteristics may be true, they don't have to be true. And where they are true, they are more likely to be due to the operation of factors other than retardation as such. Again this should affect curricula. It should affect occupational placement practices too.

For example, the perseveration of the retarded has been attributed to an inherent rigidity thought by many to be integral to retardation. Recent research by Stevenson and Zigler has brought to our attention the fact that this imputed rigidity may stem largely from the institutional background of the subjects of that early research from whence this misconception arose. Institutionalized normals have been found to perseverate too. Which is to say that most mentally retarded respond to their environment in the same way as do normals.

Gallagher's recent extended study of the affects of tutoring brain injured children has demonstrated that even within an institutional setting, learning gains can accrue where careful diagnosis is made the basis of the tutoring program. That is, while organicity imposes restrictions on learning, there is evidence both here and elsewhere that the restrictions may not be as great as we have hitherto supposed.

Not too many school systems enjoy the services of persons with the skills and training of those participating in the Gallagher study. However, the recent development of a new diagnostic instrument, the Illinois Test of Psycholinguistic Abilities (Kirk and McCarthy, 1961) will contribute toward sounder remediation, which is to say curricular recognition, of learning disabilities among many children classified as retarded because of cerebral dysfunction. Thus we are in a better position not only to learn more about the brain injured, but to make meaningful curriculum adjustments in the light of the peaks and valleys in their learning ability profiles.

At Syracuse Dr. Orville Johnson has found the retarded to possess abilities to generalize and transfer, within limitations, and in some respects equivalent to normals. Dr. William Tisdall, now at Penn. State, concluded a study relative to elements of divergent thinking that many believe are related to creativity in the mentally handicapped, from which encouraging results accrued.

Studies on the role of language in perceiving, such as those reviewed by McGranahan (1936), the Carmichael, Hogan, and Walter study (1932) on the relationship between having names for things and facility in their recall, and that by Pyles (1932) on verbal categories in relation to form discrimination among young children have been in the literature close to thirty years. They, others since then, and particularly impressive recent work all provide the empirical basis for a trend that is long overdue with respect to the retarded. They suggest that an emphasis on language, properly geared to developmental levels, and particularly stressed in children's earlier years, can promote the development of perceptual and conceptual abilities in the mentally handicapped to the extent that, with some, the facilities of the special class will not long be needed.

In other fields of exceptionality -- for example with the auditorily and the visually impaired -- we have seen in recent years a pronounced trend toward normalcy in educational provision. With the retarded, research evidence of the kind we have been citing underlines the importance of individual diagnosis and program planning, which is certainly normal treatment. In other words, we can expect that curricular provision will increasingly be for the child and less for his condition. That this implies a need in each school system for better diagnosis is clear. That it implies a need for new sensitive teaching goes without saying.

Increased Recognition of the Post-school Needs of the Mentally Retarded

Would you agree that too many of our curricular practices might give that poor visitor from outer space the impression that with the retarded we seem to have been mainly concerned with conducting a holding operation? That is, rather than organizing a curriculum structure established in the light of larger and more positive objectives, we seem too often to have blundered about on a bits-and pieces basis: relatively unintegrated field trips, smatterings of handicraft activities, watered-down snatches from the regular curriculum. And all justified by the line that at least we are keeping retarded children off the street and, we hope, teaching them to get along with people.

Well, teaching people to get along with each other is by no means unimportant. And certainly where comparative studies have been conducted of retarded children in regular classes and in special classes, such as the Cassidy and Stanton study here in Ohio, it has been found that the special classes are turning out better adjusted people. So possibly we shouldn't become too defensive about this.

While Dr. Dan Johnston here might wish to deal with this point more specifically, may I mention that we in the elementary school must also recognize in our programs the importance of social-occupational skills. These are not specific job skills but rather the habits and attitudes that are the essential equipment for entering the labor market.

It has been said before, for example on this same occasion in Detroit last year, that while increasing automation constricts the job market for the retarded, the service occupations, growing in number, offer counterbalancing opportunities. This places stress on the importance of social adjustment. And for several reasons we can't wait until the high school years bring this more sharply into curricular focus. Habits and attitudes that will make for good social-occupational adjustment are built only after many years of preparation, and, insofar as the mentally handicapped are concerned, often in spite of home influences to the contrary.

So, if it has to be an either - or proposition -- either good social adjustment or good academic learning, we shouldn't let ourselves be stampeded by current conservative sentiment into selling short that which we seem to have had some success in doing.

But it looks as if it doesn't have to be an either-or thing. Possibly on this occasion next year Dr. Herb Goldstein will be able to report on a long-term special class study he has designed and supervised in three communities in Illinois. This is an important piece of research that will offer some methodologically sound evidence on the regular vs. special class placement question. With relation to this present point may I merely say that preliminary evidence indicates that under the conditions of the study, growth can come in both academic and in social adjustment.

To sum up. The purpose of this presentation has been to indicate some directions curricula can be expected to take as a consequence of increased knowledge about children who are retarded, increased knowledge about learning materials and processes, and increased information about the community adjustment they are capable of making.

In this it is anticipated that curriculum trends will reflect a clearer understanding that the retarded are not a homogeneous group, to be considered as a stereotype, but represent a variety of disabilities, and among which the overriding need is for individual educational diagnosis and programming.

In addition, curriculum trends, as well as related teaching methods, will take new directions as we recognize that we have been guilty of further oversimplification. We have established educational procedures on the basis of what we have believed to be the learning characteristics of the retarded. Now we are increasingly being impressed that the retarded are more like normals of equivalent mental development, and that those characteristics often imputed to them more properly belong to the institutional backgrounds from which most earlier research populations came, or to the procedures by which they had been taught.

Too, we are finding grounds for optimism in the evidence that early education of the retarded holds promise of actual improvement in intellectual ability, particularly where cultural deprivation is a factor. This underlines the importance of a heavy emphasis on perceptual and conceptual development (Gallagher, 1962) with particular stress being placed on the importance of the language program.

Lastly, there is a strong trend, reaching down through the school, toward recognition that children who are in classes for the educable mentally handicapped can be taught both social skills in the broad sense and subject matter.

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REALISTIC GOALS FOR THE MENTALLY AND PHYSICALLY HANDICAPPED

Wayne Maes

Today in the United States there is a great deal of emphasis being placed upon individual and social goals. Numerous factors existant in our society have resulted in this heightened concern with what it is that we as individuals and as a nation should aim for. For example, the diffused identity and lack of purpose of our adolescent population, the external threat of other powerful nations with contrasting ideologies, and the imminance of individual and national destruction are a few of the factors which have prompted this increased concern.

When we raise this issue of realistic goals for the handicapped, we are raising the almost inscrutable question "What is the 'good life' or what is happiness?" We are asking "What is good for man?" or more specifically, "What is it that the handicapped in our society should become?"

It is all too apparent, in a period when such diverse viewpoints are being expressed as those represented by Admiral Rickover on the one hand and Dr. Conant on the other, that there are differences of opinion concerning both ultimate goals and the nature of learning experiences. Why do such differences exist and what are we to do the the face of disagreement amongst authorities? Such differences exist for a variety of reasons. Two such reasons are, lack of a consistent rationale to justify the goals selected and goals based on different assumptions or premises.

I have a persistent suspicion that educators (administrators, teachers, and consultants) frequently lack a clear conception of ultimate goals for pupils and a rationale for such goals. This is a particularly acute problem when educational programs are questioned or attacked. We need to be concerned about and have some understanding of why we present certain learning experiences rather than others, the goals toward which they guide pupils, and why such goals are important. ----

A second reason for the disagreement concerning ultimate goals and how they are to be achieved relates to the varied rationale used to justify such goals. The following are examples of some of the reasons used to justify the selection of educational aims:

1. Manpower demands in a national crisis which finds our security threatened.

2. Traditional educational aims which might include the completion of the McGuffey Reader or mental gymnastics to toughen the mind. Learning is an end in itself.

3. Competition between schools which is exemplified by an effort to prime pupils to pass the college entrance examining boards.

4. The need for technicians and the importance of turning them out in greater numbers and in shorter time.

5. Conformity to a totalitarian governmental scheme.

6. Individual rights and opportunities for realizing the fullest of man's potential.

In the face of such a variety of rationale how can we select goals and justify their existence? How can we develop a conceptual scheme and how can we decide which of the numerous conceptual schemes is the one we wish to adopt? We confront the stark question "What is good for man?" ----

In searching for justifiable goals we confront such obvious contradictions as cultural relativism on the one hand which suggests that there is no one "good" for man but good is entirely related to the cultural milieu. On the other hand absolutism suggests that there is only one way for man and that way can be described in specific detail. Whereas cultural relativism was the predominant approach to value problems in the social sciences several decades ago, there has been a swing in the direction of a recognition that there are certain basic needs and certain similarities in man's report of what comprises contentment and happiness when such needs are met - regardless of the cultural milieu. ---- Malinowski in "A Scientific Theory and Other Essays" suggests that even though there are differences in cultural systems and the way in which human needs are met, the basic human needs exist and transcend society, being a characteristic of man no matter where he is found. Maslow approaches the problem from a psychological standpoint and concurs with Malinowski.

What are the characteristics of happiness or the good life derived from human experience? Marie Jahoda in her recent book "Current Concepts of Positive Mental Health" presents a description of the dimensions of mental health or happiness which she derived from her own study and analyzing and synthesizing the concepts of such writers as Maslow, May, Goldstein, and Gordon Allport.

I would like to submit these criteria of mental health for your consideration as ultimate goals for the handicapped. Ultimate goals which are not based on expediency, national crisis or tradition but upon what it appears is essential to the happy existence of man. Along with a description of each of the criteria of happiness I will suggest, briefly, some implications of these dimensions for instruction.

1. Attitudes toward the self

    A. Realistic selp-concept, accurate self-appraisal. The coincidence of aspirations and abilities.

B. Seeing oneself as worthwhile.

Implications: Knowing the importance of positive self-appraisal one would provide learning experiences which allow for success rather than failure. An awareness of the destructiveness of a large discrepancy between how one values oneself and how one would like to be, would lead to an effort to provide pupils an opportunity to explore their assets and liabilities in an atmosphere where they could be comfortable about accepting themselves as they are.

2. Self-actualization: This has to do with the unfolding of individual potential and its maximum use. A full and active participation in living, not with a compulsive, driven quality but arising out of the sheer zest for life.

   Implications: Assisting youngsters in freeing their abilities to learn and to be motivated through the excitement of the learning situation. Remedial and enriching measures which assist the pupil in overcoming the impact of cultural deprivation and deficits in skills and abilities assist in the development of potential. Rehabilitative measures designed to maximize abilities and minimize handicaps and thereby facilitate the realization of potential also contribute to self-actualization.

3. Autonomy: Behavior is not determined by outside stimuli alone but is dictated by inner values, needs and beliefs. Maslow describes the autonomous person as one who is self-contained. We are not wishing to produce the organization man in special education programs, individuals who are pawns of the environment, but rather those who are to some extent self-directed.

   Implications: Independence can be enhanced through reducing the need for conformity within the classroom, encouraging individual projects and individual initiative and emphasizing student participation in planning learning experiences. Such programs as the work experience for the educable mentally handicapped have particular promise in contributing to the growth of autonomy.

There is not the time to elaborate upon this particular criterion at length but it is apparent to those who work with handicapped pupils that reducing overdependence and encouraging autonomy is especially important.

4. Perception of Reality: This entails observation and description of the world which is not unduly distorted by personal needs. An openness to a variety of solutions to problems.

   Implications: The critical thinking or problem centered approach to learning shows some promise in aiding pupils to view reality in an unbiased fashion. An emphasis upon listening skills and a sensitivity to others further insures a realistic appraisal of reality.

5. Environmental Mastery: Adequacy in interpersonal relations, this includes love, work, and play. Blau describes the healthy person as one who "is able to work adequately and to create within the limitations of his capacities."

   Implications: The knowledge and skills which enable a youngster to master his environment are numerous. Academic proficiencies in reading, math, and so on and preparation for the world of work, are particularly pertinent to environmental mastery. However, even more important is the development of the previously mentioned dimensions of mental health which make for an individual with attitudes which enhance interpersonal relations and job adjustment. The most saleable asset of the handicapped, the greatest opportunity for environmental mastery to be found is attitudes which facilitiate warm interpersonal relations.

It is apparent that the foregoing dimensions of the healthy person are not discrete entities but that they are interdependent. Many learning experiences are so complex as to have an impact upon all of the above named dimensions. However, certain learning experiences are more closely related to one dimension than to another.

We are already offering pupils numerous experiences which are facilitating their growth in the direction of becoming mentally healthy adults. Our task is to increase and qualitatively improve such experiences and to eliminate experiences which impede desired growth. This calls for a continuous evaluation of pupil needs as they relate to learning experience and ultimate goals.

Special education classes are fertile ground for exploration and experimentation in curricula because of reduced class sizes and the reduced pressures from school and community in the direction of academic achievement. The stage is set for some creative attempts to develop learning experiences which make sense in terms of the ultimate goals described.

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CURRICULAR DEVELOPMENT AT THE POLK COUNTY JUVENILE DETENTION HOME

Thomas D. Marro

The school at the Polk County Juvenile Detention Home is directed by the Polk County Board of Education, Special Education Department.

This paper is concerned with the program of education in the "Juvenile Delinquent" section. The boys and girls in this section range in age from 14 to 18. The average class size has been approximately 25 for the past three years.

The wide range of ages compounded by the fact that at least 90% of the students are educationally retarded presents some of the most difficult problems. Another obstacle to the development of a curriculum is that the length of stay at the center is varied. The recent [1] Annual Report showed that the average stay was 30 days. Since the average has an inherent confusion factor the table below lists the time of stay and percentage.

Table I

Number of Days stay	% Boys	% Girls
1-10	28.7	34.4
11-20	21.7	19.6
21-30	15.9	17.6
31-45	12.7	10.8
over -45	21.0	17.6

Hostility toward the school and education in general presents further difficulty in programming. The fact that these youth come from 14 different school districts with 14 different curricula also adds to our problems. These children are primarily confined for exhibiting "acting-out" behavior and it is obvious that this, added to the problems mentioned above, present a most unusual educational challenge for the curriculum developer and teacher.

The Curriculum

The class is taught by two instructors in a team teaching effort. When a new student arrives at the center he is first interviewed by one of the teachers before he is placed in class. He is also administered the Wide Range Achievement test which gives an indicator of his level of reading, arithmetic, and spelling. This information with the report from the home school gives the teachers some understanding about where to begin instruction. During the initial conference the school routine and rules of discipline are explained.

The first class period (see Education Program - page 119) is that of orientation and opening exercises. One teacher is responsible for the entire group. The other teacher is gathering information, interviewing, giving individual instruction, or testing.

The second period (#3 on the program) is devoted to individual and small group instruction. This is the time when the student works on those specific courses he is taking in his regular school. Textbooks are available so he may continue with his assignments. The first period in the afternoon is also devoted to individual subjects and follows the same pattern as outlined above.

Since we have the problem of indefiniteness of stay, the curriculum must in a sense offer "packaged" programs, so that a child entering will not be at a loss about what has gone before.

Period #4 and #5 are devoted to educational television in the areas of American History, Iowa History, Literature and Science. The classes are geared at various grade levels but may be adjusted to fit a wide range of needs. As you see period #5 is an evaluation and discussion period dealing with the television programs. We are fortunate to have a local City-County educational television station as well as a college educational television outlet. As you can observe, these programs follow the "packaging" concept.

Communication skills including reading, writing and listening are stressed in period #7 (see educational program) twice a week. Since a majority are educationally retarded, this area needs special stress.

Boys' and girls' grooming, health, etc. is taught separately two periods a week. Since some children come from homes where these items are not stressed this information fills a void in their training. Once a week a joint class is held to discuss health problems that are common to both boys and girls.

Current events are discussed and reported in class once a week. This gives the students an opportunity to speak before the group and to keep up with world and local happenings. It has proved to create an interest in reading beyond comics and sports.

Vocational exploration periods are presented to give the student an overview of various vocations. It is merely intended to help him think about some of the possibilities and perhaps start him on the way to explore for further information about his "intended" future.

Once a week a "problem session" is held to discuss general problems in or out of school. This is not intended to be a therapy session as such. Specific problems receive assistance from the Des Moines Child Guidance Center, juvenile probation officers, teachers and school psychologists.

There are two "free reading" periods a week when the student may read anything he desires. This has created a renewed interest in reading and literature. Many students are reading the classics such as Huckleberry Finn for the first time.

The students as a group were rather withdrawn and rarely responded in class

TEAM TEACHING EDUCATIONAL PROGRAM

No.	Time	Monday	Tuesday	Wednesday	Thursday	Friday
1	8:20-8:45	Teacher Preparation Period				
2	8:45-9:15	(Mr. Smith) - Orientation and opening exercises - total group (Mrs. Bayless) - Information gathering, testing, individual instruction				
3	9:15-10:15	Individual and small group academic period. Student works on his specific subjects being taken at his local school. (Mr. Smith & Mrs. Bayless)				
	10:15-10:30	Exercise Period - Attendants in charge				
4	10:30-11:00	Educ. T. V. America's Story Series Total Group (Smith-Bayless)	Educ. T. V. Landmarks in Iowa History, Total Group (Smith Bayless)	Literature Total Group (Smith-Bayless)	Educ. T. V. Let's Explore Science Series (Smith -Bayless)	Spec. Projects (Smith) Preparation Period (Bayless)
5	11:00-11:50	Television Discussion and Evaluation Period (Smith-Bayless)				
	11:50-12:45	Lunch - Attendants in charge				
6	12:45- 1:30	Same as period #3				
7	1:30- 2:00	Comm. Skills, Upper Group (Smith) Comm. Skills, Lower Group (Bayless)	Boys' Grooming, Health, etc. (Smith) Girls' Grooming, Health, etc. (Bayless)	Comm. Skills, Upper Group (Smith) Comm. Skills, Lower Group (Bayless)	Boys' Grooming, Health, etc. (Smith) Girls' Grooming, Health, etc. (Bayless)	Spec. Project Period (Smith-Bayless)
	2:00-2:15	Exercise Period - Attendants in charge				
8	2:15-3:00	Current Events Total Group (Smith -Bayless)	Voc. Exploration Boys (Smith) Voc. Exploration Girls (Bayless)	Free Reading Period (Smith-Bayless)	Problem Session (Bayless) Preparation Period (Smith)	Free Reading Period (Smith-Bayless)
9	3:00-3:30	Social Studies, Upper Group (Smith) Social Studies, Lower Group (Bayless)	Music App. Total Group (Smith) Preparation Period (Bayless)	Art App. Total Group (Bayless) Preparation Period (Smith)	Voc. Exploration Total Group (Smith-Bayless)	Speech Total Group (Bayless-Smith)
10	3:30-4:00	Teacher Preparation Time				

therefore we initiated a speech session. This is not the typical speech class. Impromptu speeches are given, tape recordings are made and conversation is the key to an enjoyable experience.

Teachers do a great deal of individual instruction in this program and take a personal interest in the pupils. Students often comment that perhaps for the first time someone is taking an interest in their learning problems as well as an interest in them personally.

[1] Annual Report of the Polk County Juvenile Home 1961, Herbert Rittgers, Superintendent.

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REPORT OF A WORKSHOP ON CHILDREN NOBODY KNOWS WHAT TO DO WITH

Elizabeth D. McDowell
Kirk Seaton

DR. McDOWELL:

This paper was presented to a professional workshop on "Children Nobody Knows What to Do With." The workshop reflected an inter-agency and interdisciplinary approach to the "hard-to-reach youth" as identified by the participants serving various health, education, and welfare services in Mercer County, New Jersey.

Co-sponsored by the New Jersey State Department of Institutions and Agencies (Division of Mental Health and Hospitals) and the New Jersey State Department of Education (Office of Special Education), the workshop brought together fifty selected professional workers representing the "helping" disciplines and agencies for a two day program (June 15-16, 1961) to the campus of Trenton State College, Trenton, New Jersey.

Every agency and professional worker concerned with exceptional children and youth has at some time experienced the realization that there are some children that present such a myriad of disabilities and handicaps that the best known and available professional services fall far short of required needs.

Essentially, the problem may be considered as follows: who are the "hard-to-reach children and youth" as identified by the various community agencies, what are the available patterns of community services, and what steps appear indicated at the present time and implications for long range planning.

Specific objectives for the workshop participants were to assess the scope of the problems and to recommend steps to be implemented. The proceedings would be published and hopefully serve as a basis for the guidance and stimulation of the efforts of the staffs of the various agencies as a help to community planning groups interested in providing improved services and as a tool for enriching programs for the preparation of personnel.

Children designated as "not suitable for our program" by every agency to whom they have been referred had come to our attention when the Staff of the State Mental Health Center appealed to other community agencies for help in transferring certain children on their case load to the reponsibility of other resources. (This operation was one step in converting a hitherto Community Mental Health Clinic emphasizing direct services to patients into a State Consultation and Planning resource for the State's Division of Mental Health and Hospitals). Other children were added to our list by prospective Workshop participants in pre-conference communications. The total group are actually a collection of specific individuals about whom participants in the Workshop have been concerned because of their frustrations in trying to cope with these children's problems. This "collection" may or may not be a representative sampling of our community's "difficult cases." We have not explored this question by appropriate survey techniques. One member of the conference described them as "those children who fall between the cracks during our screening procedures."

Why did these particular children fall through the meshes of our various agency screens? Did they differ essentially from those we did designate as "suitable" for our programs? What attributes or lacks did accepted children have that set them apart from those we rejected? On first inspection no clearly recognizable characteristics seem to distinguish them from children we have admitted, nor do any common qualifications or lacks of qualifications set them apart as a group different from those we have received. In fact, several times during our deliberations some participant observed - "I wonder why we did not accept this child, since we have with us other children not essentially different."

A closer examination of the explanations we gave for our action in such cases and the circumstances in which we made our decisions give us a clearer picture of why they seemed different to us at that time.

One of the prime reasons for our not knowing what to do with these children is that our commendable efforts to undertake no more than those with whom we felt fairly sure we could do well have produced a wide variety of agencies each offering programs of specialized services to a more or less narrowly selected clientele. Children most likely to be excluded from our community's programs are:

1. Those below six years of age and more than fifteen.

2. Those who have had certain diagnostic labels such as "brain-injured," "autistic," "schizophrenic," "pre-psychotic," "delinquent" or "mentally retarded."

The term "brain injured" apparently is responsible for more exclusions than any other diagnostic label even though it may refer to a wide variety of disorders ranging from severely crippling cerebral palsy to very mild cortical dysfunctioning detectable only by very subtle difficulties in language learning. It seems to matter little that brain damage not only manifests itself in a variety of neuro-psychiatric abnormalities, but does not mean the same thing to all people. Consequence of brain damage may mean seizure states, emotional instability, faulty attention patterns, autisms, poor organization and integration of psychological processes, impairment of sensory perceptions or of reflex responses. Moreover, some children with serious brain damage may show severe symptoms for long periods. Other manifestations of brain damage may be so mild that no treatment is required to enable a child to make adequate personal and social adjustments. Moreover, symptoms of even minimal brain damage usually vary from period to period in an individual's developmental career and may or may not be reflected in disturbed behavior. Hyperkinetic impulse disorders are not the typical picture of brain damaged children. We probably have a number of them unrecognized, but profiting by services after being accepted in facilities whose intake policies explicitly state they do not accept brain damaged children. In spite of these considerations we have been very reluctant to accept any child so called.

Other mischievous labels are "autistic" and "schizophrenic." Behavioral descriptions of the brain damaged child and the autistic child are suspiciously alike in regard to overactivity, distractibility, visuomotor disturbances, and impaired interpersonal relationships all of which we play prominently in our descriptive evaluations. Like brain damaged children, autistic and severely disturbed children show wide variations among themselves in their ability to use profitably the experiences offered in our programs.

A diagnosis of mental retardation also is likely to close the doors of some of our specialized facilities for children with visual or hearing impairments, and for the orthopedically handicapped. On the other hand, some children "essentially average or normal" in mental development are barred from programs for the mentally retarded from which they would profit greatly because established policies or legal stipulations in their charters limit the population of such facilities to this particular classification.

A third major factor in determining who does and who does not gain admission to our facilities is whether a child has parents, surrogate parents, or guardians able, willing and eligible to work with the staff while the child is receiving agency services, and to assume responsibility for him when he has had maximum benefit from the facility's program. "How much help can a child's parents or guardian give us in planning for his treatment here and in providing good conditions for further wholesome development after he leaves us?" and "How well are his parents or guardian able to use the help we can give them in carrying our their parental responsibilities?" are basic considerations in formulations of every agency's intake policies. Few, if any, facilities are willing to accept children if they foresee a likelihood of "being left holding the bag" long after this child is ready for other experiences or has shown he cannot profitably use the agency's resources.

Among the families listed as poor prospects for help were: (1) those so economically deprived that they cannot meet minimal standards for child care; (2) broken homes, and the problem-ridden or "hard-core" families whose difficulties are so great and of such long standing that they cannot hope to surmount them until long after a child's unmet needs have drastically affected his development unfavorably. Many of our intake decisions have been the product of "crisis thinking" and reflected our concern about being left "holding the bag" filled with responsibilities for children who not only cannot profit from our programs but whose presence seriously interferes with our ministering to needs of other children in the facility. We are confident that a study of children who are able to use our programs would reveal we have among them many multi-problem children who are members of multi-problem families since problems have a way of begetting other problems. Why did we accept these particular "cases" and reject others? ----

Participants in the workshop agreed unanimously that the main reason for our decisions to exclude a child was lack of understanding of this child's needs. Had we a clearer picture of what should be done for these children, we might have found something to do with them. At this point we decided to take a new look at these children to find out how they might be sorted in terms of their developmental needs and the programs most likely to serve them.

Reminding ourselves that all children have certain common needs and that many also have additional special ones, we sorted this particular "collection" of individuals according to their patterns of needs and their assets for participating in the programs available.

We agreed our first obligation was to provide for every child a home that could give him adequate food, shelter, and good physical care (including medical care and attention) to make him feel comfortable. In addition, we should make sure that he continuously experiences relationships with adults who love and care for him.

Second - we should see to it that he has experiences which will stimulate his senses and his mind so that he can perceive the world about him with as little distortion as possible. This implies help in developing his special talents, in overcoming his special difficulties, and in learning how to earn a living, to stand up for his rights, and to exercise his responsibilities as a citizen.

Third - he should have opportunities to associate with his peers and to enjoy with them the pleasures and benefits of companionships and sociable activities and through such experiences gradually to become acquainted with the institutions of the society in which he must assume more and more responsible roles.

Last, but not least - we must make sure that he has every opportunity to become the kind of person that he, as well as others, can value and respect, that he can understand and accept his own assets and shortcomings and cope with the frustrations, as well as enjoy wisely the satisfactions of being a "real person" with a sense both of his unique identity and of his belongingness in the world.

This is certainly a large order, especially in light of the many unique needs of our collection of children. Most startling of all our disclosures in this appraisal, however, was the fact that we did not have sufficient information about any single child to make any decisions about what should be done for him. Although our community is comparatively rich in facilities for specialized services and has more than a fair share of professionally talented and competent personnel employed in its agencies, we found twenty prototypes of "Children Nobody Knows What to Do With" making the rounds of our welfare facilities. The prime question now seems to be "What can we do about understanding what these children need to be done for them so that we will have resources for doing something with them?

This issue of what can we do about them will be explored next by Dr. Seaton.

DR. SEATON:

We are concerned today with unmet needs in the general area of social and clinical services. This area is part of a larger domain -- the domain of need which cannot be met by individuals themselves through the usual channels of the private practice of medicine, or through the regular program of the schools. These needs are the concern of social agencies, clinics, institutions and welfare services.

Before we focus on unmet needs let us review briefly the existing structure of services.

How did these services develop? Certainly not by process of logical planning. Logical planning would have required that social needs be surveyed, that clusters of related needs be identified, that facilities be established to meet these clusters, that staff and resources be balanced to the task.

Social services did not arise in this manner. They grew piecemeal over a long period of time. Some have changed to some extent with the times. Other have not.

Most agencies or services were established to deal with some narrow category of need such as children with cerebral palsy, destitute families in need of relief, individuals returning to the community from penal institutions, individuals with tuberculosis or threatened by it.

Whether or not an agency or service was provided and the type and amount of service made available often depended on:

1. The degree to which the problem was concrete and understandable to some segment of the community. Thus concern for blind children preceded concern for children with CNS impairment.

2. The emotional appeal of the problem - was it saleable? i.e. could the need be presented in a manner which would elicit support?

3. The intellectual and social climate of the times:

   Consider the origins of the Y. M. C. A. and the Salvation Army. Interest in Freud, etc. preceded the community mental health clinic.

4. Possible support from existing institutions, agencies or even important or

wealthy individuals.

As legislators and parole services

(sectarian) welfare services

5. Economic wealth of the area, educational level, density of population, etc.

With social services which have grown in this manner, it is inevitable that we would have many unmet social service needs. Service to meet the central problem of an individual or family may be lacking. Furthermore most problems are not unitary but multiple. Instead of an emotionally disturbed child who needs psychotherapy, a mentally retarded woman, an alcoholic man or a destitute family, we have a hungry, emotionally disturbed child with a mentally retarded malnourished mother and an unemployed alcoholic father.

If service intake policies are set up on an exclusive basis such as "we take deaf children who are not retarded" or "we take retarded children with no serious sensory or orthopedic defects," what will you do with a retarded deaf child?

Or if your mental hygiene clinic says we can only help those who feel the need and want help, what are you going to do with the mean paranoid-like parent who doesn't feel there is anything wrong with him?

There may be a lack of or inadequate provision for channeling clients to resources or even uncovering the problems. In the case of the mentally retarded mother and alcoholic father, will they seek help? If not, who will detect that help is needed? If the parents seek economic relief, will welfare services also draw into the picture other appropriate resources? If they suggest to the mother a family case work or clinic resource, will the mother make it on her own initiative? If she does not, will welfare keep working to draw in additional resources?

Starting where we are now, how do we proceed so that we are moving toward a more comprehensive and more effective system of social services? The conference that struggled with this problem in New Jersey finally sorted a very large number of concrete suggestions into five principal categories:

1. Better use of existing programs and services.
2. Extending and strengthening existing services.
3. Setting up new facilities to meet needs not provided for under 1 and 2.
4. Improved practices in using agency services.
5. Continuous evaluation of our adequacy for meeting these children's immediate and future needs.

Suggestions for making better use of existing services fell in turn into four subcategories.

First, it was generally agreed that communication between agencies left much to be desired. Agency personnel were not fully aware of services actually available. This ignorance could often be traced to turn-over of agency personnel and faulty orientation of new personnel, to a lack of directories of services, directories in need of revision and directories which did not give sufficient information about intake policies and range of services. Furthermore, many agencies had not developed statements of policy and service and regular meetings of personnel from various agencies were not held. Better communication between agencies and clear formulations of services were regarded as essential.

Second, there was a recognized need to increase the flexibility of agency programs. Coupled with better communication many unmet needs could be overcome through modifications in existing services to avoid overlapping and to meet needs where there is currently a lack of service.

Third, many participants reported great value in "difficult case committees" or "case conference committees" composed of representatives from various agencies and services. These committees meet to consider cases requiring a coordination of services or problems which seem to fall "between" the areas of agency service. By constantly considering such cases, there is "feed-back" which results in changes in the policies of agencies and in the improved coordination between agencies.

Fourth, some value was seen in the physical centralization of many agencies and services to facilitate communication and to make it easier to shift clients to other resources by leading clients to other offices, introducing them to intake workers, etc.

"How may existing services be expanded and strengthened?" was the second major point considered by the conference. In some respects suggestions made under this heading duplicated those made under the first. Additional specific suggestions fell into three groups.

Comprehensive diagnostic studies of problem cases, studies which went far beyond those usually made, might give increased insight as to the services necessary for the solution of these most difficult problems.

Secondly, there was much value in standing committees made up of representatives from various agencies charged with the responsibility for identifying lacks in services, for suggesting ways in which gaps could be closed, and for calling these to the attention of an appropriate body such as a Council of Social Agencies.

Third, some kind of machinery was recommended for bringing together professional personnel and members of Boards to discuss recommendations made by the standing committee for modifying established programs in the light of each agency's commitments to other beneficiaries of their programs.

Again, when it came to the establishment of new facilities, it was believed that many of the suggestions made for the better use of and the expansion and modification of existing services would be applicable.

Once the need for a new service was identified and its area of function generally delineated, a multi-disciplinary committee should be assembled to consider the staff and resources required for successful operation. Only then could community leaders be provided with the material necessary for developing the requisite community support for the new facility.

If all these lines are followed diligently there would be, of necessity, many socially desirable outcomes. There could be much more emphasis on prevention. There would be far fewer clients "lost in the shuffle" between agencies. There would be a marked reduction in the human misery caused by lacks in facilities and ineffective use of facilities for clients whose problems are difficult and complex.

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POST SCHOOL VOCATIONAL POSSIBILITIES FOR SLOW LEARNING STUDENTS

Hoyt D. McPherson

The Dayton Vocational Training Program for senior high school students was organized to become effective in September, 1960 under the auspices of an Improvement and Expansion grant from the Office of Vocational Rehabilitation. The program was considered necessary by the Department of Special Education of the Dayton Board of Education in order to provide a realistic education for slow learners in secondary schools. It was considered that work training or any other training is useless and meaningless if it is not realistic and purposeful. Consequently, the underlying theme of the Dayton program is to provide realistic work experience for every senior high school student prior to graduation.

In order to provide a frame of reference, an outline of the scope of the Dayton Special Education Program for slow learning high school students is necessary. The total school program in Dayton embraces 58,000 students in all grades. Dayton, Ohio is primarily an industrial community. There currently are 68 class units comprised of 1000 students in 32 classes -- 500 of these in six high schools and 500 in 36 elementary classes. Of the 500 high school students, 157 are eligible 11th and 12th grade students and of these there are 107 now in work training.

The program is administered by a full-time coordinator with offices in the Dayton Board of Education building. In each high school sustaining organized Special Education classes there is a teacher-counselor whose duties are to consolidate and coordinate the efforts of all those interested persons in the school towards the objectives of the program. Each of these teacher-counselors is afforded one-half a day for the counseling activities attendant to placing these students in their respective work-training situations. The coordination of this Special Education Program with the regular school program in each high school is a joint responsibility of the full-time coordinator and the respective teacher-counselor in that high school. In addition, the coordinator, Supervisor of Special Education, and a representative from the Bureau of Vocational Rehabilitation and one teacher-counselor from one of the high school programs, meet regularly to discuss, screen and recommend referrals to the Bureau of Vocational Rehabilitation for additional services for those students for whom this service would be considered most beneficial.

Of the 107 students now participating in some type of work-training, 93 are male and 14 are female. The mean chronological age is 17-7, and IQ's range from 50 to 80. The mean IQ on the basis of an individual examination, either Wechsler or Binet, is 66. All of the participants have been classified as slow learners. Some sustain multiple handicaps, such as partial deafness, visual difficulty, lack of coordination, etc.

Approximately one-half of the participants are engaged in part-time work training, and half are in cooperative work training - equal periods on the job and in school. Several are engaged in full-time activities, reporting to their respective teacher-counselor at periodic intervals for counseling and guidance. The average length of participation of those students now in work training is 26 weeks. In the work areas 50% of the assignments are in the food service areas, primarily cafeterias. The students work as bus boys, food line service personnel, or kitchen personnel. Approximately 25% are engaged in grocery store activities, and the remaining 25% are employed in services such as plumbing, custodial, automotive (body shops and service stations) department stores (primarily custodial), messenger, production, theaters, and child care.

The initial problem in preparing slow learning children for work was found to be preparing society, business and industry, to accept these persons as potentially productive workers. It was considered that preparing anyone to take his place in a non-receptive society was an impossibility. Consequently, initial efforts were expended in the direction of creating a receptive attitude on the part of the businesses and industries that were to participate.

A Citizens Advisory Council was organized consisting of personnel administrators from the leading business and industries in the Dayton area. The function of this committee is primarily one of public relations. ----

On-the-job supervision in the Dayton work training program is almost as varied as the different types of work situations involved. Supervision relies strongly upon the effectiveness of employer-counselor action. It is felt that if the employing supervisor and the school counselor can communicate effectively and realistically concerning the unique limitations and capabilities of the individual participating student, the efficiency of the supervision is greatly enhanced. The teacher-counselor or the coordinator attempts to make regular periodic supervisory calls into each work training situation and in addition makes himself available for call at any time concerning a specific problem resulting from supervisor-employee misunderstanding.

As in the interest of supervision, the evaluation of satisfactory performance relies strongly upon employer acceptance. An insistence upon realism dictates that the criteria of success is a degree of adjustment of a trainee to the work situation, as determined by the employer, and as evaluated by the employer's acceptance of the trainee in his work capacity. A strong dependence upon employer understanding as a criteria of successful employment was considered to be the most realistic approach. The actual instruments of evaluation are periodic report forms and semi-weekly or weekly conferences with immediate supervisors. The eccentricities of satisfactory employment are well illustrated by the number of "retreads" who have been re-assigned after failing to make satisfactory adjustments in initial assignments. Successful experiences resulting from re-assignments are an indication of the importance of interpersonal relations in a work situation.

In any program, such as this one, one might naturally query the selective techniques employed and the relationship to predicting the successful potential of the candidates. Before considering the currently employed selective techniques one must consider that in any program with a similar history to that of the Dayton program, wherein a well-established, purely academic orientation was immediately projected into the above described realistic work training program, selection is "inverse". Instead of developing the work habits and attitudes necessary for immediate placement and satisfactory work adjustment, those students were selected who demonstrated that they already had acquired the habits and attitudes from some source outside of the specific objectives of the school program in which they were participating. In the short span in which this program has been in operation, it has not had an opportunity to develop the necessary work habits and attitudes. However, observations and inferences from the activities of these students will contribute substantially to the development of the total program - the ultimate development of the vocational orientation of all the students, K through 12. Selection is predicted by the placement of those students currently demonstrating the habits and attitudes necessary to satisfactory employment.

During the course of the first year many problems have been observed to be attendant to the program. An overview of the program would not be sufficient without a discussion of these problem areas. One factor certainly necessary to satisfactory life adjustment is parental approval and support. This, at least, holds true during the "live at home" years. The parents need to realistically embrace the possibilities for their children and support their endeavors to obtain realistic objectives. The parent of the slow learner who wants him to be a doctor and instills the desire for such an unobtainable objective precludes failure. Recognition, acceptance, and reinforcement throughout the course of the school years would remedy many, if not all, subsequent attitudinal deficiencies, such as over-confidence, lack of confidence, prejudice, unrealistic self concept. Much more can be accomplished in developing suitable habits during the early school years. Specifically we need to attend to the improved development of stick-to-ativeness - completing work begun; regularity, teacher and parental concern for regular attendance; punctuality - early concern and not punitive reaction; industry - participation in the activities of the classroom regardless of the functioning level at the very beginning of the child's school years; the development of habits of undertaking tasks that can be accomplished but that are challenging, and carrying through to the finish. This, instead of relegation to a chair in the corner, outside of the peer group activities. In addition to these problems that are unique to the slow learning student participating in the program there are the problems attendant to all teenagers regardless of intellectual capacity which we cannot overlook.

There are several other factors concerning the candidates who are currently participating in the Dayton program that are considered to be significant. In general, the participating students come from socio-economic backgrounds that are somewhat substandard. When one considers realistically that there is a tendency on the part of the families and faculties in the "better" schools to de-emphasize or ignore the existence of those students who would qualify as slow learners and who might profit from such a program, and when one further considers that the degree of parental concern as to the specifics of secondary education for their children seems to correlate positively with the socio-economic status of the family group, it becomes obvious that the most prevalent group from which we will be able to readily identify and place slow learners is the low socio-economic group. It is not our purpose here to go into the relationship between cultural heritage and mental deficiency. It suffices to observe that the majority of the students in the program come from families or home situations where the parents are engaged in semi-skilled, or unskilled labor. It is considered that it is entirely within the realm of possibility that this could become established as an important factor in determining the vocational functioning level of the individual participant. It is also observed that the majority of the students currently participating in the Dayton program are members of a racial minority, a minority that has been relegated to unskilled and semi-skilled labor for many generations. In addition, they are primarily first and second generation migrants to this area.

The Dayton program is currently providing a stop-gap service for the slow learning high school student. This will continue until such time as we can work together to develop a program from kindergarten throught the 12th grade; until such time that the total program will develop the attitudes and habits, and sometimes the necessary skills, that will assure the student an adequate and satisfactory vocational adjustment. This is in contrast to the current endeavor to select, place and sustain those students who have already acquired these attributes during the course of their independent development.

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PREDICTION AND MEASUREMENT OF SPEECH IMPROVEMENT IN THE MENTALLY RETARDED

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We have recently been completing a pilot study at the University of Utah under a grant from the National Institute of Mental Health, the purpose of which was to determine whether the speech and language of mentally retarded speech defective children improves in training as a function of their language and speech scatter scores.

Scatter scores have been referred to variously as the total number of passes above the basal score, the total number of misses between the basal and ceiling score, or the total range of scores between the basal and the ceiling score. Since most "scatter scores" are derived on tests employing dichotomous scoring procedures, e.g., pass-fail, the total number of misses between the basal score and the ceiling score has been most frequently used as the scatter.

In the present study, however, the verbal language development scale used was an extension of the communication sub-test of the Vineland Social Maturity Scale which was published as a separate test by the Educational Test Bureau in 1959. As with the Vineland Scale, the scoring of this test is on the basis of plus, plus-minus, and minus -- a trichotomous scoring procedure. It was not possible, therefore, to use total misses or total passes above the basal score as a "scatter" because this would not take into consideration the plus-minus scores in the final analysis. The scatter scores were derived by subtracting the total score from the ceiling score, thus taking into account all pluses and plus-minuses above the basal score.

Subjects

Subjects for the study were selected from the special-education classes of the Utah State Training School for the mentally retarded. Ten children having "large" scatter scores were matched in sex and IQ with 10 children having "small" scatter scores. All children in the two groups had speech or verbal language delays in relation to their mental ages.

The CA's of the "small scatter" group ranged from 14-1 to 20-7 years and those of the "large scatter" group ranged from 12-6 to 19-3 years. The mean CA's of the two groups was 16-10 and 14-11. The IQ's of the first group ranged from 51 to 68 and those of group 2 ranged from 51 to 72. The mean IQ's for the two groups were 59.2 and 58.4 respectively. The scatter scores of the first group ranged from 1 to 3 points and those of the second group from 3.5 to 10.5 points. The mean scatter scores for the two groups were 2.05 and 6.35 points respectively.

Procedures

These 20 children were given seven months of speech and language training by an advanced graduate clinical assistant. The approach to therapy was geared to the philosophy that drill work should be minimized and that corrective work should be integrated into experience and communication centered activities.

Verbal language of the children was tested at the beginning and at the end of the seven month therapy period by the graduate clinician. Children in both groups were given equal training for an equivalent amount of time and by the same speech clinician. The clinician did not know that scatter scores of the children were being studied, nor did he know that the 20 children with which he was working belonged to two separate groups. As far as the clinician was concerned, all 20 were children who were delayed in speech and language development.

Table I shows the verbal language scores of the mentally retarded children, displaying small and large scatter scores, before and after seven months of speech therapy. Before and after scores are presented for each group and differences between before and after scores are analyzed for significance of change by use of the Wilcoxon matched-pairs signed-ranks test. As can be seen, the differences in the before and after language scores of the small-scatter group were not significant. The differences in the before and after scores of the large-scatter group, on the other hand, were significant beyond the 1 per cent level of confidence.

The scores which appear in the last portion of Table I are differences in amount of improvement made by the matched pairs of the two groups. The Wilcoxon T score of zero, with an N of 10, is significant at less than the 1 per cent level of confidence. This suggests that the response to training and resulting improvement in language development was significantly greater in children with large scatter scores than it was in children with small scatters.

Table I. Verbal language scores of mentally retarded children, displaying small and large scatters, before and after seven months of speech therapy

Pairs of subjects	Language scores of small scatter group		Language scores of large scatter group		Language score difference of first group		Language score differences of second group		Difference between pairs in amount of improvement	
	Before	After	Before	After	Diff.	Rank	Diff.	Rank	Diff.	Rank
1	28.5	29.0	22.5	27.5	0.5	1.0	5.0	9.5	4.5	10.0
2	29.0	29.0	18.0	18.5	0.0	-	0.5	1.5	0.5	2.0
3	29.5	29.5	19.5	20.5	0.0	-	1.0	3.0	1.0	4.0
4	28.5	30.0	15.5	20.5	1.5	3.0	5.0	9.5	3.5	9.0
5	29.0	30.5	24.5	26.5	1.5	3.0	2.0	6.0	0.5	2.0
6	28.0	30.0	20.0	22.5	2.0	5.0	2.5	7.0	3.0	7.5
7	31.5	31.5	21.5	23.0	0.0	-	1.5	4.5	1.5	5.5
8	30.5	32.0	26.5	31.0	1.5	3.0	4.5	8.0	3.0	7.5
9	31.0	31.0	26.5	27.0	0.0	-	0.5	1.5	0.5	2.0
10	26.0	26.0	22.0	23.5	0.0	-	1.5	4.5	1.5	5.5
					$T = 0$ $N = 5$ $\underline{P} = > .05$		$T = 0$ $N = 10$ $\underline{P} = < .01$		$T = 0$ $N = 10$ $\underline{P} = < .01$	

Summary

In summary, it can be concluded that, although there are discrepancies among various studies which have been done regarding the reliability of a developmental quotient as a predictor of future development, much evidence suggests that with many children additional criteria are needed for adequate prediction. Furthermore, there is evidence which strongly suggests that scatter scores may be helpful in predicting the extent to which increments in developmental quotients may be expected as a result of special training. Further research needs to be done on a larger number of subjects in order to verify the results of the present pilot study.

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VOCATIONAL COUNSELING AND PLACEMENT OF THE DEAF

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It has been over 50 years since Frank Parson wrote the book which is generally considered as the starting point of vocational counseling. That book, Choosing a Vocation, was the first real attempt to match the specific talents of men to the requirements of occupations. As we know, vocational guidance grew rapidly. Two world wars along with an emphasis on and opportunities for education and training in a rapidly developing technology all contributed to this growth. At present, scarcely a college or university exists that does not have a counseling service. In spite of this growth and its general acceptance - clients come to these different centers with very strange ideas of what vocational counseling can do for them. Commonly a student client comes expecting to take a few tests and be told what to do for the rest of his life. In contrast to this, vocational counseling is, Super (1949) states, "... the process of helping the individual to ascertain, accept, understand, and apply the relevant facts about himself to the pertinent facts about the occupational world which are ascertained through incidental and planned exploratory activities." But too often college clients do not want to get involved in the tedious task of piecing together all the pertinent bits of information about themselves, their experiences and the world of work. To varying degrees this applies to both hearing clients and our deaf clients at Gallaudet. While the range of individual differences is as wide among deaf clients as hearing clients, there do seem to be some contrasting differences between the two client populations. Generally, our deaf college clients possess the following characteristics to a greater degree.

They are more naive in their belief that tests and the counselors' direct advice are the primary tools for vocational choice. They have a greater lack of experience and knowledge of the world of work. They seem to have a more severe feeling of inadequacy associated with job performance and a greater dependence on others.

Due to the presence of these characteristics and because the deaf client typically needs help in securing occupational contacts, we have developed a more extensive vocational counseling service to include job placement. In this respect, we differ from other counseling centers, since placement services are usually handled by a separate agency on the campus.

When our clients first come in, they are disillusioned to find they will not receive direct advice gleaned from test results. The counselor must undertake a very patient explanation of why it is necessary for the client to actively participate, that the client's experiences and feeling are the primary tools. Often our clients find this explanation meaningless. They become impatient and many drop out at this point, feeling that the counselor is failing them or being overwhelmed by the suggestion of so much work on their part. The entire situation is so new to them. Most of our deaf clients come from environments where they have worked closely with interested adults who have given fairly complete direction to their behavior. Realizing this, the counselor must motivate, while he continues to orient the client to a new way of regarding the latter's part in the counseling situation. The counselor must maintain a fine balance between giving support and encouragement and taking away authoritative props. Structuring the nature of the vocational counseling is a very delicate process, when the situation is so foreign to the clients.

It is not uncommon for vocational counseling to extend over a long period of time. To some degree this may be due to slowness in communication. However, getting the client to trust his own judgement and to realize that even commonplace experiences have meaning, takes in itself a good deal of time. Many of our clients avoid becoming involved in this, for they are aware of their comparative lack of experience and knowledge of the world of work. This puts them at a severe disadvantage compared to their hearing peers. Typical college clients seem to need a good deal in the way of acquainting them with certain areas of accurate information in the world of work. However, many of their own experiences offer a good basis for understanding and integrating specific details about various occupations. Since deaf clients have difficulty in gaining this background, they are often less ready to take an active part in the counseling process. To bring the client to the point where there is a somewhat mutual exchange of ideas between him and the counselor, we have had to rely quite heavily on occupational information -- getting the client to read a lot. One method we hope will be a good remedial step is the use of occupational films, captioned and shown on a regular basis to all interested students. While our clients secure the information we must carefully explain to them how this relates to things they know about, often filling in wide gaps in their experiences. The whole matter of developing knowledge through occupational information is an important but potentially tedious task for them and requires considerable patience on the part of the counselor. We have noticed that our clients are very sensitive to signs of impatience. If they become aware of it, many will react by dropping out of counseling.

This seems to reflect in part another characteristic we have noted: feelings of personal inadequacy and apprehension concerning ability to perform in a number of occupational fields. To help deaf clients make an objective appraisal of vocational demands or requirements through occupational literature is not enough. Carter (1940, p. 185-189) states the well known theory of occupational development and choice, that " . . . the individual derives satisfaction from the identification of himself with some respected group; by this method he seizes some sort of status. This identification leads to an interest in restricted activities and experiences; to the extent that this is true, the person learns about the vocation and the vocational group." This certainly highlights the need for a variety of personal contacts with people in different occupations.

It is not unusual to listen to hearing clients animatedly talk of their likes and dislikes for different occupations in terms of the people they know in them. They have many friends in varied occupations and have had the opportunity to see and hear what others are doing. Our clients have not had these experiences. While deaf people have been increasing in their range of occupations, according to a recent national survey (Lunde & Bigman, 1959), the occupational strongholds of the deaf are still in printing and publishing and the schools for the deaf, i.e., in teaching. Our clients are oriented through their experiences with others in the world of work to think along these lines. Many of their friends are in printing, they themselves have skill in it, and the deaf students are typically in much closer, extensive contact with their teachers than hearing students.

These contacts are no doubt rewarding for many of them, but still it seems that they feel excluded and apart from the range of experiences others enjoy. And in being excluded they must feel a sense of rejection. Initially, at least, most of our clients do not admit to such feelings. We find instead that a greater share of our clients than hearing clients will flatly state that they are not interested in occupations that they know nothing about. But in many of these instances, as the interview series progress and the clients feel more comfortable, they admit in various ways to a complete lack of knowledge and many times to feelings of inadequacy.

Vocational Counseling includes trying to help them deal with these feelings that result not so much from actual failure, but rather the absence of the opportunities to try. To help the clients secure such opportunities, we found it necessary to obtain information on what occupational aspirations were realistic ones. Quite apart from the measurement of the clients' talents and skills and the job requirements, there is the employer's attitude. This was the reality factor we had to explore. It had to be recognized that much of the rejection that the client had experienced in the past would occur in the future if he aspired to a job where the employer had an unreasonable, negative stereotype of deaf people despite their talents and skills.

It was therefore necessary to direct research at developing knowledge of the job opportunities. In process, we not only discovered job openings, but also called forth specific requests for deaf people from interested employers. However, many of our initial efforts were still met with employer resistance. We found these resistances to be based on misconceptions of the ways in which deafness limits a person's job capabilities. It was necessary that we bring realistic information to the attention of these prospective employers. Personal visits were made at the policy-making level in government and private industry; we established working relationships with coordinators for the physically handicapped in the various departments of the Federal Government; and hundreds of telephone calls were made to follow job leads. One particularly effective effort to educate potential employers has been a series of industrial workshops held on the college campus. The participants have been personnel directors from government and private industry. In the two we have had thus far more than 50 have participated. They visit classes in progress, acquaint themselves with our curriculum and facilities, and with the personnel research in progress. Results of these workshops have been quite gratifying. We have received telephone calls and letters of appreciation, requests for our students to visit their places of business, and specific job placements.

As a result of this increased interest a problem has emerged. We had clients who we felt were somewhat apprehensive about being interviewed and some prospective employers who felt the same about doing the interviewing. We were not sure of what role we should play here. It seemed that in general the best approach would be to arrange the contact and accompany our clients, acting as interpreter. We soon found out that this was not necessary for all of our clients. They had perhaps more than the normal anxiety associated with initial contact, but were willing to attempt it on their own and to write in order to communicate. For others there was considerable anxiety and more than we would find with hearing clients. It was especially at this point in our services that we noted in our deaf clients a greater dependency than is generally found with hearing clients. It is difficult to define this dependency. There seemed to be two forms. At first with certain clients it seemed to be only a passive willingness to let others take the initiative with the expectation that this would be done. As mentioned before, the close adult supervision and direction they receive may logically explain this behavioral pattern. If this was the only form of dependency it could be dealt with by thoroughly explaining, as we did in the initial part of the interview series, the divisions of counselor and client responsibility. But in a number of cases we found that while there was a recognition of these facts there was an underlying emotional resistance to accept them; again, more than one usually finds with hearing clients. We have tried to deal with this gradually in the interview series in conjunction with the other problem mentioned, but in truth we cannot say that our efforts have been as successful as we would like. When our clients come to us this emotional need has developed over a long period of time. We feel there is a definite need for many of the college clients we have seen to gain work experience earlier, to gradually receive more and more opportunities to accept such responsibilities. During this time there is the necessity for planned guidance. This is well stated in a recent report on *Research Needs in the Vocational Rehabilitation of the Deaf* (Roger, M. and Quigley, S. P. (Eds.), 1960, p. 354.) "There appears to be a need .. for the existing schools to establish comprehensive programs of vocational guidance and counseling. Facilities need to be provided for the training of special personnel to direct this counseling and guidance. These counselors would need to have all the skills of any guidance person plus training in the special problems of the deaf." Until such programs materialize, the special problems of the deaf college clients we have seen in vocational counseling can be only partially alleviated.

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EFFECT OF SPECIAL CLASSES ON PERSONALITY AND ADJUSTMENT OF EDUCABLE MENTALLY RETARDED

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A review of the goals of education for all children, as stated in recent influential publications, seldom finds academic achievement listed as the primary goal, and never as a sole goal. Mental and physical health, human relations, citizenship, emotional security and independence, creativity, worthy home membership, occupational competence, ability to enjoy wholesome leisure time activities, social competence, these concepts predominate. It is no surprise, then, to find personality factors given even greater prominence among the goals of instruction for the mentally retarded.

It is much more difficult to assess a child's status and his improvement in a personality dimension than to assess his achievement in the tool subjects or in a given body of knowledge or set of skills. Any effort to evaluate the effectiveness of special classes must, however, make the attempt.

In a study concluded in Chicago in 1961, we endeavored to evaluate our special class program for the retarded by selecting carefully matched pairs of mentally handicapped children, one member of each pair to be in a regular grade and his match in a special class. We then followed the progress of those children over one and two-year periods of time. The matching variables were age, sex, IQ, reading level, previous school attendance in the rural south, foreign language handicap, a record of brain injury, and socio-economic status. The criterion variables for comparing effectiveness of the two types of placement, included improvement in the tool subjects and in a special test of general information, and also the improvement or change in a variety of adjustment criteria.

The achievement results parallel the results of a number of other recent studies in that these educable mentally retarded children made approximately as much academic improvement in the regular grades as in our present special classes. In neither placement did these pupils, on the average, achieve academically up to their presumed potential.

There was evidence also of a selective factor operating in the direction of underestimation of the true intelligence of a greater proportion of the children in the regular grade group. This could be an important source of bias. If the regular grade group was in fact more intelligent than the special class group, though equated for rated IQ's, then the special class may have done a better job with the pupils it had. The implications of these academic findings have been presented and discussed elsewhere.

This paper will concentrate on the findings with respect to the personal and social adjustment of these children. Effective instruments for such a study are scarce, and difficult to develop. EMH children lack both the mechanical reading skill and the comprehension to take paper-and-pencil tests of personality factors. Projective techniques present problems of interpretation, objectivity, and economy of scoring. Normative data for either type of evaluation, with mentally handicapped children, is scarce indeed in the literature. Rating scales to be used by an examiner may be affected by his limited opportunity to observe the child. Rating scales based on teacher reports may be influenced by the frame of reference of the teacher. The special class teacher perhaps has a different set of standards than the regular class teacher.

After much experimentation, the Chicago research staff evolved six instruments, using three approaches: teacher reports, examiner evaluations, and pupil performance. The teacher report instruments included an Adjustment Rating Scale and a Behavior Check List. The examiner evaluation was based on an Observation Checklist, from which the examiner derived a Motivation Appraisal and a set of personality categorizations. The performance instruments included a projective picture-story test, a sociometric interview, and a test of maturity of interests. In all of these the final form of the test to be used, the scoring and interpretation procedures had to be developed by the staff. We also used the Bender-Gestalt.

The Chicago Adjustment Rating Scales require but a few moments of the teacher's time for rating and scoring. However, they require the teacher to make judgement of the level of the pupil's adjustment, and such judgement is obviously influenced by the teacher's frame of reference.

The Behavior Check List was therefore designed to avoid some of the problems of rating. It requires the teacher only to indicate that certain specific behaviors have or have not been observed in the classroom and school. From it, personality categorizations and adjustment patterns are statistically derived. It can be checked by a teacher in five minutes with high reliability, but takes longer to score. It yields five scale scores and 7 personality patterns.

The Observation Check List was developed as an aid to the examiner in recording his observations of the test behavior and physical characteristics of the EMH pupil. It records the examiner's appraisal as based on his observation of the pupil while taking tests or being interviewed or working in the classroom and as based on school records and reports of school personnel. On the basis of these sources of information, the examiner categorized each child according to five patterns: Passive, passive-hostile, well-adjusted, hyperactive, and active-hostile. The instrument also provides for ratings of each child's motivation in the test situation, his relationship to the examiner during the test and interview, and any observable negative physical characteristics.

The Interest Maturity Test was designed to gauge the level of social maturity of a child's interests. The child is required to choose between two activities from the same area of interest but of different levels of social maturity. There are different forms for boys and girls. Items were selected on the basis of differentiation between the choices of normal and educable mentally handicapped subjects of different age groups. It was developed primarily for another study of a variety of ways of teaching EMH pupils. It did not reveal differences between the special and regular grade groups.

The Sociometric Interview was devised to get an indication of how a child feels about his classmates and how he interprets their feelings toward him. It consists of seven brief questions introduced by the words, "Tell me about the boys and girls in your room." It is scored for two factors: the child's feeling of acceptance toward his classmates, and his feeling of being accepted or rejected by them.

The projective technique selected was a modification of the Michigan Picture Test and the Thematic Apperception Test. The child is assigned the task of telling a story about each of ten pictures. The EMH children of the entire age range of our study (7 to 12) were able to give satisfactory and scorable responses. In developing an objective and quantifiable scoring system, the features of subject responses used by previous workers were used if they proved to be recognizable and objectively verifiable in the protocols of our subjects. From the raw scores, personality scales were developed, to include Gross Productivity, Effective Productivity, Ineffective Thinking, Positive Value Systems, Superego, Hostility Insecurity and Passivity, and Optimism.

The subjects of the study included originally all of the pupils who had been found to have IQ's on an individual psychological examination between 50 and 74 IQ, who were between 7 and 12 years of age at the beginning of the study. This included 2865 cases, 2067 of whom were in special classes at the beginning of the study and 798 who were on the waiting list. Form these, over 300 pairs were tentatively matched, but because of the difficulties of matching pupils on nine variables, and keeping them matched and in constant placement for a two-year period, the numbers were much reduced. Finally, data on test and retest over a one-year interval were collected on 128 pairs (256) children, and for only 64 pairs over a two year period.

Subjects might be in any of our 400 special classes in more than 140 different schools, or in regular grades in any of our 400 elementary schools. Class size in the regular grades averaged 35, in the special classes with a maximum of 15 for the primary and 18 for the advanced groups, averaged just under 15. All teachers, whether on a permanent or temporary assignment are fully qualified teachers, with the special teachers having met state standards of special training. The percentage of temporary teachers, the percentage of schools in underprivileged neighborhoods, and the percentage of classes on double shift were not significantly different in the two groups.

Results

On the various rating scales of adjustment, both those reflecting teacher judgement and those reflecting examiner judgement, none of the changes over the one or two year periods differed significantly between the two types of placement. The Interest Maturity Test also showed no significant difference between the groups.

On the Sociometric Interview, the special class group gain was larger than the regular grade group, the difference being significant at the 10 per cent but not at the 5 per cent level of confidence. This is some indication that during their residence in the special class the EMH pupils became both more accepting of their classmates and more confident that they were accepted by their classmates.

On the projective technique, over a two-year period, the special class group showed a significantly greater decrease in hostility than did the regular class group. There were also trends indicating greater gains for the special class group on a Positive Values Scale, and greater decreases on Insecurity. The regular class group, however, showed the greater improvement on the passivity scale, i.e. a greater decrease in Passivity. While these personality test data can be interpreted ambiguously, the findings from the projective personality test, along with the trends from the Sociometric Interview, tend to support the hypothesis that the emotional climate in special classrooms have a salutary effect upon the emotional adjustment of mentally handicapped children.

Possible sources of bias. Since the differences in improvement of the adjustment of pupils in regular and special classes cannot be characterized as great or clear cut, we turned back to the initial status of the two groups to look for possible sources of bias. It will be remembered that the two groups had been matched, individual by individual, not only in age, sex, IQ, and achievement, but in socio-economic status, in history of schooling in the rural South, and in report of brain injury. They had not been matched on other adjustment criteria. Differences between the groups at the time of first testing were therefore computed, and significance tested. Differences were not significant on the Bender Gestalt, nor on the ratings of overt adjustment as made by the examiners. On teacher ratings, however, both on the Adjustment Rating Scale, and on the Well Adjusted Scale derived from the more factual Behavior Check List, there were significant differences in favor of the special class pupils. Special class teachers apparently tended to rate their own pupils significantly higher than non-specialized teachers rated the matched pupils left in the regular grades. This finding needs interpretation in view of the experience of administrators and teachers that where there is an extensive waiting list for special class placement, the children presenting to the regular class and the regular school the most serious problems in behavior and adjustment tend to be transferred to a special class in preference to a more placid child, even if the latter happened to be more retarded intellectually or in achievement. How does it happen that a group of children, in the special classes, many of whose members were known to be selected when in the regular grades as maladjusted, appear in a special class to be considered on the average better adjusted than those left behind?

Three hypotheses suggest themselves: first the children placed in the special classes are somehow innately "better" children than their matched pair mates in the regular classes. Second, the difference may be due to the greater leniency or attitudes of acceptance of the special class teacher, without any difference in the children. Third, there may be a real improvement in the child's adjustment as a result of his placement in the special class. The first hypothesis is contradicted by known transfer procedures. As to the latter two, we can only speculate.

Another method of analyzing the data of the study yields an interesting sidelight on the question. Two groups of EMH children differing conspicuously in their school adjustment were selected, not only from the matched pairs but from the larger number of cases for whom data were available. The well adjusted group contained only children so rated by both examiners and teachers on both initial and retest. The poorly adjusted group contained only children not rated well adjusted at either initial or retest, or pupils who, according to both teacher and examiner, had worsened in adjustment between tests. Children with inconsistent scores were not counted in either of these groups. Both groups were subdivided according to whether the child was in special or regular class, and according to sex, and the various subgroups compared on most of the other types of data available.

A number of factors were found to be associated with poor adjustment in regular classrooms and with better adjustment in special classes. These factors appear to have an underlying similarity in that all were adverse social or family conditions, or were suggestive of multiple handicaps. For boys, these factors included having mothers supported by ADC, being known to protective agencies, and having poor over-all ratings on speech. For girls factors associated with better adjustment in special than in regular classrooms were likely to live in communities of low economic status, in homes without central heating, to have ratings of fair or poor in home atmosphere, to have speech characterized as poor in general fluency and intelligibility, and poor or fair voices.

Compared with children whose mothers were employed days full time, EMH children with mothers on ADC had poor prognosis for adjustment in the regular grades. Children known to protective agencies such as the police and the courts also appear to have a low probability of being in the well adjusted group in regular classes. Children known to protective agencies were not found in the regular grade well adjusted group. Girls whose home atmospheres were rated as fair or poor appeared to have a fairly good prognosis for adjustment in special classes, but a poor prognosis for adjustment in a regular class. In summary of this part of our analysis, the special class seems able to maintain and develop a good adjustment on the part of EMH pupils with a wider variety of social, economic and cultural problems than does the regular class.

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ASSESSING AND INTERPRETING THE IMPLICATIONS OF FAILURE IN LIGHT OF PSYCHOLOGICAL FINDINGS

Stanley Nale

First of all, it should not be considered that a child is failing when he is unable to measure up to the level expected for his chronological age group. He does, however, fail when he feels failure. I simply mean that when a child is not satisfied with himself and sees himself as being unacceptable, non-belonging, and unworthy, the groundwork is laid for non-conforming behavior, truancy, dropping-out, etcetera. Children need to feel that they are contributing and therefore worthy of a place within their group. Social, emotional, and physical difficulties may contribute to failure in school. It is, however, proposed that the majority of children who fail do so because they do not have the mental abilities for competitive performance.

The country has been indoctrinated with a 3 percent figure in terms of numbers who are mentally retarded. This may be true, depending upon one's definition, but in reality a figure of 15 to 20 percent is more realistic. A child with an IQ of 95, or 90, or even 85, is not mentally retarded, but many in this range will function as if they are retarded. It is proposed that in the majority of school units throughout our state and in many other states the children with IQ's from 75 to 95 are forgotten. They are not eligible for special classes, and they are not ready at age six years for the level of learning that is expected of first grade children. They go on to the second grade without the readiness or the achievement necessary for that level of work. There is little concern in the early grades, because they are not really too far behind, and we live with some kind of delusion that they will catch up. The children soon become aware that they are not pleasing the teacher, their parents, and other students. The feeling of difference arises, and the children retreat, show aggression, or escape by truanting.

Few children doing well in school truant, few children doing well in school behave badly, and few children doing well in school drop out. Let us look for a moment at the children in correction schools. In North Carolina, their average IQ is 82. Some are there primarily because of truancy. In almost every instance, the beginning of delinquency was truancy from home or school. Nearly all the children I see who are referred for not learning, behaving badly, or not attending regularly are mentally slow. They are in the elementary grades, four through eight. It is my proposal that mentally slow children are not handled adequately in our present educational systems and that the inevitable educational failure that follows leads to serious personality difficulties. ----

Granted that a large proportion of emotional disturbances in children can be traced to the home and to the parents, a great deal of this could be alleviated instead of increased by the way the child is handled in the school situation. If a child's emotional and mental needs, as well as physical, are not being met both in school and at home, he is going to be unhappy and frustrated, unable to develop his potential abilities, and he will be establishing emotional attitudes which pave the way for future delinquency or neurosis. Many children who are brought to the psychologist with a label of emotional disturbance, turn out to be emotionally immature youngsters who are not yet ready for the tasks expected of them in first grade and who are acting out their frustrations defensively instead of conforming nicely as the teacher expects. When the pressure is lifted, they gradually return to normalcy.

This psychologist is aware that in many schools children are being taught at their levels regardless of grade placement. Teachers have made a real effort to do this but frankly I don't think it can work. Even if a child is doing as well as he can, and most immature children are not, it is not an adequate performance for his group, and he cannot easily identify with others in his group. The ungraded primary is adequate as a remedy, but we must be frank in our interpretation of this to parents or they will expect their children to go to the fourth grade at the beginning of the fourth year.

Grouping is another method for attacking the problem. It is a fairly good method, but a child can look across the aisle and recognize a superior group, or it may be known that Miss So and So has the slow group. There is no easy way out. We must tell parents, so that we can have a successful, ungraded, primary system or a readiness class that will serve its function in the true sense of the word.

It is this psychologist's opinion that postponement of attendance is not the answer. Our rural children in remote areas need a readiness experience, and another year at home will not suffice. Admittedly the readiness class and the ungraded primary are both grouping methods, but they are better than grouping within the classroom in terms of the child's feeling good about himself.

It is also proposed that these slow children can go to high school. In the academic course? No, but high school can have varied curricula as easily as colleges have their several schools. Many college students in the school of education would not do well in the school of chem-physics with all due respect to the school of education (I'm a graduate of one). Students are guided into specific schools within colleges. Why not begin guidance at the preschool level and continue through the secondary level into college? When the slow children level off, shift them to an occupational type training in the elementary grades and let them be guided to those kinds of courses at the secondary level. It is believed that children will stay in school if they are doing what they are able to do in a group to which they feel a sense of belongingness. It is basic to want to mature and children will mature if they have a chance to work in the area of their interest.

We cannot afford 20 and 30 percent of failures, and we can avoid it if we will reject the great myth that all people must learn a level of reading, writing, and arithmetic that meets some arbitrary standard. Why cling to an outmoded shibboleth? Some children cannot learn enough of the three R's to use them effectively in living. We should give them as much as they can take and then shift to the occupational. We cannot do this, however, by holding tenaciously to the idea of fitting all to the same mold. We verbally say that we do not do this, but the figures speak for themselves. They don't fit the mold, they fail, our efforts are not only meager, but futile and the hostile dependency that is created in children is in actuality disabling.

It is painful to me to see a quarter of a million dollar public school plant, new and beautifully set up, being utilized for the education of only 60 percent of its children. I know of such a school, and there are undoubtedly more where 40 percent of the children have IQ's of less than 90. These children, almost to the child, are working at a level that is inadequate for their group. Our level of expectation does not change. Our concept of a norm remains the same. The only change is that a higher percent of the children are lagging behind. Half of this 40 percent drop out during the elementary years but twenty out of a hundred go on to high school (as they should, and the drop-outs should be going too) but unfortunately the fare offered them is one of algebra, history, English, chemistry, etcetera, which presents no challenge because it is beyond their comprehension.

It is interesting to note that in a particular school, every child in last year's graduation class whose IQ was 90 or above left the county, most of them to college and trade schools, while those having IQ's of less than 90 and whose achievement levels are at the primary and elementary levels are all staying in the county. It is my guess that most of the drop-outs and many of those who went through the academic course (the academic course certainly did not go through them) will become dependent on society. The schools have been forced through the ignorance of their constituents (the parents) to attempt to teach all children the same amount of the same thing.

It would be exceedingly more desirable to permit them to advance at their own rate in getting what they can in terms of the three R's and thereafter to concern ourselves with their attitudinal and value systems and with the occupational skills that will enable them to attain worthwhile goals in society. It is reasonable for some children to aspire to positions of prestige, to have two cars in the garage, and a boat on the river. But even with these average and gifted children there is doubt that material values should be emphasized. The slow child may need a different set of values; in part, his should be like those of the average and above average child but there are other things that cannot be given a premium insofar as the slow child is concerned. Those things are simply not available to him and a pseudo-level of aspiration will only bring frustration and breakdown. It just is not true that any boy can be president or that a person can be anything he chooses to be.

Tests and ratings by teachers show that approximately one-third of the children in our schools in western North Carolina have maturity ages of less than six when they enter the first grade. Some of these have average intelligence, but their struggle is intense and the first year full of agonizing frustration which could be avoided if they could only wait a year before beginning the first grade. Then with greater maturity, they could accomplish first grade work naturally and joyfully, liking school from the very first experience, thus building a foundation for good school adjustment throughout life. I suspect that most children enter the first grade at too young an age. It could be arranged so that children would need to be age six years at some date prior to their entering the first grade. The average maturity level would be increased with this adjustment. It may, however, be more desirable to permit children to enter school when age five and one-half years. The deprived, the slow, and the immature children could attend the readiness program whereas the gifted would have the opportunity for an early start in the first grade.

School psychologists are employed in a few systems in our state, but unfortunately in many instances they are besieged with requests to help the child who is already failing. The child referred may be in the seventh grade, he may be reading at one of the primary grade levels, and he may be difficult to manage. He may also be truanting and in general presenting such a problem that he is of real concern to the teacher.

The student referred is usually a boy. More boys than girls are failing. More boys are truanting. More boys are dropping out of school, and more boys are delinquent. More adult males than adult females are inadequate educationally. This is contributing to breakdown in family life. But this is a subject for another paper. It does, however, cause me to wonder when I see graduating classes composed of eighty girls and twenty boys.

I am besieged with these failure cases, and what can I do? The child's feeling of difference, his tension, his attitudes, his hostility, etcetera, make it difficult to change things so that he will want to tackle again the material that has caused his frustration. It is sometimes possible to bring about some changes by having this child supplement the academic lesson of the day with project and demonstration work. He may then feel that he is contributing and that he is somebody, after all. I have confidence that the matter of readiness will in time be given maximum attention, but I fear that school psychologists who do not know what to do will be employed and that they will become bogged down with referrals on children who have failed and will not see or not know how to go about the business of preventing failure. The screening of preschool children should not be started until it is fully understood at all levels and the machinery for readiness classes or the ungraded systems are ready to operate. The occupational program should also be ready, at the elementary as well as at the secondary levels.

To emphasize again, we need to recognize and to point out to parents that children at age eight years can learn in a matter of hours the academic material that will require months of effort at age six. This does not mean that children should be eight years old before they start to school. On the contrary, they should start at six or maybe five and one-half, but they need to learn to pay attention, they need to learn to adopt better inner controls, they should be introduced to elementary value systems, and they should learn to enjoy. There is plenty of time for the three R's. Indeed the three R's will come much easier at that time when each child reaches his point of readiness.

I have not referred to a single research study but I am aware of most of those which are related to this problem. I have surveyed the psychological abstracts, and I have read many of the studies in detail. Most support this presentation; some few do not. I am aware that many states and many systems do something about their immature children. Many retain or postpone the children who are retarded at the educable level. They are, however, reluctant to work with those who are only a little slow. My reference is to these slow learners and to the immature children who may have average intelligence. It is not enough to retain or postpone attendance; rather it is desirable to provide readiness classes at the pre-first grade level and occupational classes at the elementary and secondary levels. Not many systems are complete, and I feel that we cannot afford incompleteness.

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SOME OBSERVATIONS ON DESIRABLE QUALIFICATIONS FOR TEACHERS OF THE MENTALLY SUPERIOR

T. Ernest Newland

Some Background Observations

1. Heavily reflective of a philosophy of education which has a broad base of social sensitivity and which is tailored to the unique psychological characteristics of the mentally superior and to their essential roles in society.
2. Reflective of some knowledge of the psychological characteristics of the mentally superior and, of course, of their learning processes.
3. Unfortunately reflective of all too many direct observations of gross misconceptions of, or unawareness of, 1 and 2, above, on the parts of teachers, administrators, and parents, and of the resulting outcomes of educational and psychological mutilation.
4. Realistically reflective of the absence of directly relatable research.

Two Definitions

1. "teacher" - a culturally and professionally qualified person who manipulates children and their environments so as to facilitate learning by the children in those environments.
2. "mentally superior" - the top 3 to 6 percent of our generalized pupil population, primarily in terms of their capacity to conceptualize.

Two Delimitations

1. Concerned only with children of public school age range, probably not lower than three nor higher than 18 years of age.

2. Not here concerned with "talent specialists" who profess to be committed to work with children in areas where high conceptualization capacity has not yet been demonstrated to be the primary determinant of outstanding performance, e.g., perhaps, graphic arts, some music, and most athletics.

Some Essential Qualifications: Positive interrelationships probably exist. Order not important.

Personal

1. Be emotionally secure. Not to be confused with smugness or conceit. More comfortable with involvement in inquiry than secure in the existence of facts.

2. Be intellectually curious. More concerned with the joy of learning than satiated with or lulled by the assumption of having learned. More a "Why?" person than a "What?" person.

3. Be intellectually agile. Not the defensive behavior of the paranoid or psychopath, but in the sense of seeking new structures of experience, new structurings of experience, or new approaches to experience.

4. Have a moderate to high energy level. Be enthusiastic, but not to the point of being superficial or highly distractible.

5. Have basic intellectual potential appropriate to the level of the children being worked with. A "must", because of the need to be able (1) to communicate with the children, (2) to recognize the evidences of the conceptualizations of the pupils, and (3) to stimulate toward and otherwise cultivate higher conceptualizations on the part of the children. Probably means equivalent of a WAIS VIQ of 120 and 130 as minima for elementary and secondary levels respectively.

Professional

1. Have 1-3 years of teaching experience which clearly demonstrates the above plus evidences of characteristically individualizing instructional procedures.

2. Functional comprehension of the nature of the conceptualization process and of its levels of operation.

3. Appropriate to the level of children worked with, a subject matter competence plus at least a broad cultural sensitivity and curiosity.

4. Comprehending sensitivity to dynamic and developmental aspects of children and youth.

5. Comprehension of the philosophical and historical background of 20th Century education.

6. Functional grasp of the merits and limitations of the results and elementary concepts of educational and psychological measurement.

7. Knowledge of research findings on the mentally superior and a critically curious predisposition toward forthcoming research in this area.

8. A functional commitment primarily to the ends of education and only secondarily to the means of education. A greater concern for the outcomes of education than for "methods".

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AN APPROACH TO MEETING THE PROBLEM OF NON-TRAINED TEACHERS IN CLASSES FOR THE RETARDED

Norman J. Niesen

Introduction

One of the most serious problems which confront public school programs for the handicapped is the critical shortage of fully trained teachers of special education. ---- The reality and dimensions of this problem can be seen by analyzing what is happening to the program for the educable mentally handicapped in the State of Ohio.

Five years ago, there were slighly more than 400 classes for the educable mentally handicapped in this state. Today this number has expanded to nearly 1100 classes or an increase of approximately 300 percent. It is apparent that public schools are attempting to meet the demand for additional classes for the mentally handicapped.

Examination of the level of training of teachers and of these classes reveals that approximately 75 percent cannot meet existing certification requirements for this special education area. The State of Ohio needs to train about 300 teachers per year to meet demands in this area; its state colleges and universities are presently training less than 40 teachers.

The content of this paper is a description of the in-service training program which has been developed by the Cincinnati Public Schools to help untrained teachers of the educable mentally handicapped.

The in-service training program which has been developed provides experience and training in nine areas. These are:

1. Participation in Teacher Institutes
2. Practicum
3. Guided Group Observations
4. Individual Observations
5. Close Classroom Supervision
6. Informal Teacher-Supervisor Conferences
7. Participation in Curriculum Development
8. Formal Appraisal of Teaching Effectiveness
9. University Training

Participation in Teacher Institutes

A week prior to the opening of school, the Cincinnati Board of Education sponsors a city-wide teacher institute. The institute consists of morning and afternoon sessions for a period of four days. The Division of Special Education provides for the four-day period a nationally known leader in the field of mental retardation to consult, guide, and work with teachers. All teachers new to the Cincinnati system are required to attend these meetings. All other teachers are urged to attend. ----

Practicum

Practicum consists of a series of seventeen weekly two-hour meetings of all newly appointed teachers. These meetings follow a pre-planned program, and are generally divided into two parts. The first section of each meeting consists of a group discussion centered around a topic, such as Planning Your School Day, Using Your Curriculum Guide, Developing Meaningful Seatwork, Counseling Parents, etc. Supervisors and administrative personnel provide the leadership for this part of the meeting. In the second section of the meeting, the large teacher group is subdivided into small groups according to the various instructional levels of ~~the~~ program for slow learners. For example, teachers of primary units meet as a group. Teachers of intermediate units also meet as a separate group, etc.

Teacher Observation and Visitation

It is the practice in the Cincinnati Public Schools to provide every teacher with at least two paid days to visit and observe other selected capable teachers in a classroom situation. Recently the Cincinnati Public Schools has extended this practice to include an additional visiting day for first-year teachers.

The in-service training program of the Division of Special Education uses these days to provide guided group visitations and to provide individual observations.

Guided Group Visitation

The group visitation and observation provides for a supervisor to accompany a group of beginning teachers on a one-day visitation and observation of two master teachers. The classrooms visited are of the same instructional level as those taught by the visiting teachers. For example, all new teachers teaching primary units would visit and observe two master teachers who are teaching primary units.

Prior to the visitation, the master teachers and the supervisory staff carefully plan the content of the program that the new teachers will observe. At the end of each observation, a group conference is held. Those participating in the conference are the beginning teachers, the supervisor and the master teacher.

Individual Observations

Each beginning teacher is also given two days for visiting two other master teachers. These master teachers are teaching children at similar instructional levels as those taught by the beginning teachers. The master teacher is advised by the administrative and supervisory staff of the Division of Special Education concerning the areas in which the beginning teacher needs special help.

Close Classroom Supervision

The Division of Special Education has two full-time supervising teachers for classes for slow learning children. Each has supervisory responsibility for approximately 60 teachers. The supervisors give high priority to helping beginning teachers early in the school year. When a beginning teacher is facing a crisis of any nature, provision is made for supervisory help within the hour.

Beginning teachers receive a minimum of 10 supervisory visits per school year; and, where situations warrant, as many as 20 supervisory visits are provided.

After each visitation, the supervisor completes an observational report. This report is filed in the teacher's folder in the Division of Special Education. These reports are used for informal conferences, formal appraisal, and for problem-centered discussions during practicum. It is a practice in the Division of Special Education to permit teachers to see what has been written about them concerning their teaching performance.

Participation in Curriculum Development

The Division of Special Education holds monthly curriculum development meetings. All teachers in the Division of Special Education are invited to participate in this activity. The purpose of these meetings is to examine existing curriculum materials and to revise and improve the present instructional program.

This project operates for the most part on a small group basis. The curriculum project is divided into four groups according to the instructional levels of the slow learning program. That is, teachers instructing primary age children work together as a group as do teachers at other instructional levels. Under this approach, each new teacher is privileged to work closely with highly experienced teachers in developing methods and materials which can be used in their classroom teaching.

Formal Appraisal of Teaching Effectiveness

A regular system of formal appraisal of teaching effectiveness consists of a self-appraisal and an evaluation by the teacher's administrator and supervisor. This is done by using a prescribed appraisal form and a face-to-face conference. Both the teacher's and the supervisor's appraisals are written.

The written appraisal provides for comments concerning areas where the teacher's appraisal and supervisor's appraisal are at variance. This appraisal is conducted yearly for a three-year period each spring.

University Training

The University of Cincinnati provides course work designed to help teachers in the field of mental retardation. ---- The P. T. A., the Parents Association for Slow Learning Children, and other community groups provide scholarship monies which are used to pay the tuition for some teachers enrolled in these courses.

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EVALUATING THE SCHOLASTIC ACHIEVEMENT OF VISUALLY HANDICAPPED CHILDREN

Carson Y. Nolan

The curriculum of a school is essentially a description of the goals, intellectual and other, which children are expected to attain. Intrinsic to the educational process is the determination of the degree to which each child has attained the goals implied in the curriculum. This problem is common to the education of all children and several methods are commonly used to achieve this purpose. These include formal and informal ratings by teachers, and written and oral tests which may be subjective or objective in form. All such methods are applicable to the evaluation of educational achievement of visually handicapped children.

When we examine the scholastic or intellectual goals set for children we find that these are many and varied. Involved are such things as acquisition of factual information, attainment of knowledge of principles, development of such abilities as generalizing, reasoning, problem solving, and development of general verbal and numerical skills. ---- Often we are forced to restrict our evaluation of scholastic achievement primarily to such areas as factual knowledge, ability to state principles and use principles, knowledge of words, and ability to perform numerical operations. Standardized achievement tests are commonly employed to achieve this end. This paper will concentrate on standardized achievement tests as a means of evaluating scholastic achievement of the visually handicapped.

Generally speaking, use of standardized achievement tests to evaluate scholastic achievement is at best only a partial solution to the problem of evaluation. They cover only part of the total school program. Based on national or regional educational goals, they are often inappropriate for evaluation of programs developed within a particular school system to meet community needs. Standards for scholastic achievement used with these tests are based upon national samples and may be unrealistically high or low depending upon various cultural factors existing within the population from which a given school draws its pupils. This latter problem is, of course, of great significance to the evaluation of scholastic achievement of visually handicapped children.

Use of standardized achievement tests for evaluating scholastic achievement of visually handicapped children dates from 1918. Lowenfeld (1955) mentions use of such tests as the Gray Oral Reading Check Tests, Metropolitan Achievement Tests, Myers-Ruch High School Progress Test and the various editions of the Stanford Achievement Tests. These latter tests are in greatest use today with five equivalent forms currently available in both Braille and large type from the American Printing House for the Blind.

Throughout the story of the use of standardized achievement tests with the visually handicapped, there is an underlying theme of frustration and doubt. Questions arising as to the meaning of individual test scores obtained from adapted tests have resulted in consistent frustration of efforts to apply them to the solution of common educational problems. Why should this be the case? The answer lies in the fundamental nature of achievement tests as implied in the term "standardized."

Much of the usefulness of standardized achievment tests results from the fact that they provide a common frame of reference for evaluating scholastic achievement of children everywhere. This is accomplished by holding constant a number of variables in the testing situation. Held constant are the test content (the actual test questions), the method by which the test is administered, the length of time allowed for each part of the test, and the method by which the test is scored. Meaning is given to scores on achievement tests by expressing them in terms of the average achievement of a national sample of school children for each month of the school year at each grade level. ----

Thus, standardized achievement tests are valuable because we are able to assess each child's achievement under approximately identical conditions. Tests give us a common "yardstick" for comparing achievement of individual children, achievement of classes within the same school, and achievement between educational programs. The "inch marks" on our educational yardstick are established empirically by the number of test questions that will be answered correctly by the average child at each grade level for each month of the school year. Since these have been established under standard conditions of testing, if we change the testing conditions, the previously established "inch marks" are no longer true or valid. Adaptation of standardized tests for use with visually handicapped children almost invariably involves changes in the standard conditions of testing which result in loss of validity or meaning for the scores obtained. Changes commonly made in standard testing conditions include changes in the time allotted for tests, changes in the methods for administration of tests, and changes in test content. Each of these changes influences the meanings of scores obtained by test use.

The first thing necessary in adapting a test, particularly in Braille, is to edit the test content. Many tests contain items that are unsuitable for visually handicapped children, i.e. they require behavior not possible by blind children or present information, usually in chart or graph form, that cannot be put into Braille. It is necessary either to omit such items or to change their form substantially. Either of these solutions violates the standard conditions of the test. If we omit a test item, we change the number of increments in our measuring instrument and the meaning of the test score is no longer the same. If a test item is changed, we still have the same number of increments of measurement, but the method of measurement has been changed with a subsequent loss of meaning.

Because of the slowness of Braille reading, it is necessary to change the standard time limits of tests for visually handicapped children. At the present, a somewhat arbitrary ratio of 2.5/1 is used as an adjustment factor. This ratio is based on the comparative reading speeds for Grade 1 1/2 Braille and print reading as established many years ago (Hayes, 1937). Since tests are currently published in Grade 2 Braille, this ratio may no longer be appropriate. In addition, the use of any single ratio for adjusting test scores assumes that the ratio between Braille and print reading speed is the same at all grade levels and for all forms of material commonly presented in achievement tests. This, however, has never been established as a fact. The effect of time limits, particularly for the lower grades at any test level, is to restrict the amount of opportunity that children have to attempt to answer test items. We do not know, at present, how the time extention made for Braille reading effect the opportunity of visually handicapped children to attempt test items for the various types of tests. Therefore, we have a source of further ambiguity in interpreting a Braille test score. An identical problem exists in the case of large type tests.

Changing the administration of tests from written to oral form is sometimes done to overcome problems stemming from Braille reading. In the oral administration of tests, the examiner reads each question to the test group. Responses are made by marking one of several possible answers on a Braille answer form. No time limits are imposed. Each child has the opportunity to attempt to answer every question. This procedure constitutes a departure from standard conditions in several directions. Variation in test scores resulting from differences in reading ability are of course eliminated. Eliminating time limits and allowing each child to attempt every item results in inflation of test scores, particularly for the lower grades at each test level. This has been demonstrated by research (Davis & Nolan, 1961) which has also demonstrated that the correction factors suggested for this method lead to over-correction.

As can be seen from the foregoing, present methods of adapting achievement tests for use by visually handicapped children result in a number of conditions which lead to ambiguity in the meaning of test scores. This situation seriously impairs the usefulness of results from achievement tests. This is particularly true when sporadic testing is the practice.

Many of the problems listed above can be by-passed if systematic testing is employed. This is easily possible since achievement tests commonly appear in several equivalent forms. A good procedure is to test at the end of each school year or to test at the beginning and end of each school year. The tests are scored as usual and the test raw scores expressed according to the sighted norms. However, these norms are not used directly to evaluate the child's performance. Instead, what is used is an ipsative norm which is based upon the child's previous test performance. A child's test score at the beginning of the school year may be above or below his grade placement as a result of the changes that have been made in the test or test procedure. However, the difference between this score and subsequent scores that the child obtains will be significant. A test score obtained at the end of the school year should represent an increase in grade score equal to the length of time between tests if the child's progress is that of average children. This procedure can, of course, be extended to groups. Many educational programs have developed their own norms for evaluating scholastic achievement of visually handicapped children through use of modifications of this procedure. In order to use tests in this way, we assume that the changes introduced in the adaptations of achievement tests result in only constant errors in test score.

An opportunity to improve the usefulness of standardized achievement tests for visually handicapped children exists in the near future. The Test Deparment at Harcourt, Brace and World is currently developing a new edition of the Stanford Achievement Tests. They have agreed to cooperate in adapting the new edition for use with the visually handicapped. Adapting these tests at the time of their standardization will provide an opportunity to overcome many of the problems existing in current tests.

A major problem with current tests is that some items or test sections have been eliminated because of unsuitability for Braille. As was pointed out, this violates the standardization of the test with resulting loss of meaning for test scores. In the forthcoming edition of the Stanford Achievement Tests, the tests will be edited for use with the visually handicapped and then a separate set of norms will be developed based only on the test material to be used with this special group.

Changes in test administration to avoid problems arising from Braille reading also were mentioned as sources of error in adapted tests. The principal change is using oral methods of giving tests. For the forthcoming Stanford Achievement Tests, it is planned to study the effects of oral administration using the normative populations as subjects. This will give a very direct estimate of the influence this procedural change has on the norm scores. The data obtained will provide the means of developing a correction factor for use with oral administration or furnish sufficient evidence for a decision to abandon this procedure.

Changes in the time allowances for the tests will be made on a different basis than before. Previously a crude ratio of Braille reading speed to print reading speed was used. To set time limits in the forthcoming tests, distributions of numbers of items attempted by the norm group for each grade shall be obtained. The tests will then be given to representative groups of visually handicapped children in the appropriate grades. The distributions of items attempted for the visually handicapped children will be made to match the distributions for the normative group and time limits will be empirically estimated for each test on this basis.

Achievement tests currently available for use with visually handicapped children are applicable only for grades two through nine. Harcourt, Brace and World plan soon to develop a series of tests designed for use in grades ten through twelve. It is currently planned to adapt these to the visually handicapped using methods similar to those described above.

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READING DIFFICULTIES - A CONTRIBUTING FACTOR TO UNDERACHIEVEMENT AND FAILURE IN SCHOOL

Lorene Love Ort

The non-reader presents to himself a can't-do image; to his contemporaries he is a non-union man; and, in essence, he is a fringer, for he has been denied a peer credit card that would have given him an "in" with others of his age. Bankruptcy to the adult and reading failure to the child in school equate themselves with approximately the same impact and frustration.

If a child cannot read, he is caught in a veritable educational mousetrap, for most of his basic learnings in school are presented in books, literature, the social sciences, science and much of mathematics. If failure to read is the pupil's lot, then failure will echo itself hoarse in nearly every scholastic area throughout the child's school years. To perceive of oneself as a failure is to envisage a highly frustrating image, and the child responds to such a self image in various and tragic ways. We have all known the silent child, the tormentor of teachers, the sneering one, the stealer, and all the many others who failed to attain the stature of being academically worthy.

Laura Zirbes, the great contemporary educator, once said that a good life is one which is able to convert obstacles into means, so let us consider six reading obstacles in need of conversion.

First of all, we act too often as if there were only one way to teach a child to learn, and we behave as if learning to read through the medium of the printed page were that only "open sesame" to the good life. Schools fail here. Teachers fail here. Parents fail here too. We fail to proliferate knowledge to the extent that we might through true diversification, through graphic materials, demonstrations, field trips, resource persons and places, A-V aids, and other communicative means which will teach a child through his multiple senses. Too much learning is a "from here to there" function, from page 89 to a page 137 droning, or from monotony to tedium and back again.

Learning to read with the eyes alone is not the only key to reading. Blind children, for example, can see through their finger tips, through a heightened sensitivity to hearing, through smell and through touch, and, despite the fact that they have no visual sight, they can and do see to read, and they read very well.

Some children who today know the terrible stigma and hurt of reading failure could have been spared at least some of the shame and humiliation. They could have been taught to read if they had handled, felt and physically manipulated language. Others who failed to learn the art of reading needed to hear its delightful cadences more clearly before they tried to analyze its more complex and abstract linear form. A sizable number of those who failed to taste reading success just needed to know language as a desirable form of communication before they exerted themselves to read. The child who has found language to be a crude, harsh and vindictive whip which has sought him out mercilessly has little yen to read that from which he seeks to escape.

For those children who from infancy into childhood have never known the croon, the lulling, the joy and love that families express to their young, for these emotionally illiterate children we, who are teachers, must somehow write the readiness of the primary concepts of language into their personalities. These must be happy, good and enriching concepts, and as we write these readiness factors into the child's personality we must entice him into wanting to read that which had been written there. Even the sternest and most austere Puritan father knew this, for written into the prime frugality of the New England Primer is this warm and sagacious dictum: "My book and hart must never part." Teachers of all ages and stages must educate the heart if they are to see the mind give forth its glorious bounty. The Annie Sullivans of the teaching world must, for the most part, go unsung, but there is need for their patience and their understanding of the child and his developmental readiness in numbers legion.

Secondly, the reading literature itself must appeal to the pupil. Somehow we must convert much of today's textbook tedium into verbal treasure.

For the child who "catches" the reading process late, there is a great need for constant materials having these prime elements: a simple language structure, a basic but good vocabulary, writing having a high-level reading command, clearly stated concepts, a format that teases reluctant eyes to keep gulping and grasping new thoughts, and an art form that is virile, vigorous and accurate. Since many reading difficulties tend to befall boys, much special writing should be planned specifically for them. At no time, however, should either the writing or the illustrations assume a condescending attitude, and at all times the format should grant dignity to the person involved in the reading process.

Thirdly, children who have reading problems must work with a teacher whose sound waves can be trusted, who is intelligent, compassionate, objectively understanding and honest. I say "honest" because every child who has a reading impediment must be helped to face the problem squarely and analytically before he can start helping himself to overcome his own obstacle. A child who dares to answer truthfully the "What is my problem?" query that is a part of the greater "Who am I?" quest is well on his way toward demolishing his own dilemma. On the other hand, a teacher who fails to be honest with a child about his reading problem is neither kind, fair or intelligent and is, in reality, hindering a child from realizing his desired potential.

Fourthly, there is need for intensive reading experimentation. In one segment of British Columbia, an experiment is commencing next year which is aimed at preventing reading failure among boys in an elementary school. Currently, there is a screening process being conducted in an attempt to locate young men who will be suitable instructors for young boys from grades one through six. It is planned that the boys will engage in the bulk of their work with male teachers, and their major concept work will be carried on apart from the school society of little girls. However, in socializing areas (art, music, gardening and some phases of health and physical education), classes for both boys and girls will be merged. The intent is not to segregate but to discover such things as these about young boys: (1) When does their natural reading spurt commence? (2) Toward what reading materials do they gravitate? (3) Do present commercial reading materials fit the needs of young boys? (4) What scientific, mathematical and social learnings appeal most forcefully to young boys? (5) In respect to academic learnings, how do boys and girls differ?

The point is that here is a group of educators who recognize a very sizable problem and they are trying to overcome this obstacle through careful and deliberate experimentation.

Fifth, although we must continue to emphasize remedial reading programs, we have a real need to place greater emphasis on sound practice throughout the school experience, and, certainly, we must increase our values concerning those initiatory experiences in the primary grades. Too often schools are willing to buy pounds of remediation, but they are unwilling to consider the price needed for one, lone ounce of prevention. Well equipped and pleasant classrooms having small and realistic enrollments which will permit a mature, well-prepared and understanding teacher to work intelligently with each child's individual differences would eliminate the need for many remedial classrooms. Conversely, the educational crop dusting of big, impersonal classes only serves to discourage that human plant which germinates slowly and has trouble rooting and growing. But statistics prove that crop dusting is cheaper, don't they? Or do they? You may remember what Mark Twain once said about lies: there are three kinds of lies, lies, damned lies and statistics. Sometimes statistics sell us very short. If we sell pupils short, they, in turn, will sell schools, teachers and the principles that support these institutions short, in fact, much shorter. The Rich Young Ruler turned away from a most enviable legacy when he was told that one thing more was needful. We who are educators dare not turn away from that which is needful. Our legacy is our destiny.

Sixth and last is the factor of time. There is, it seems to me, too much emphasis on when a child should commence to read. On the one hand, we mouth individual differences, but on the other we stress uniformity and conformity. Although we know that boys represent the largest factor of a school's reading problem population and although we know that generally a boy's fine muscles tend to develop later than those of a girl, still we deliberately set out to entice failure when we start boys and girls in reading classes at the same shot of the curriculum gun.

Too, we have behaved, since the sky has become so full of alien things, as if a child had to learn faster and earlier than ever before. Further, since the accretions of knowledge have piled as high as the moon in the sky, we are permitting some unscrupulous ones to rape the integrity of the kindergarten program by thrusting formalized learnings into an area which has absolutely no business becoming formalized so that more can be squeezed, jammed and pressed down into the already burgeoning elementary curriculum. Indeed, today's reading problems will look like mere child's play as compared to those current reading dragons we are now conjuring into existence.

Again, we tend to act with time as if it had but one direction, straight ahead and 'way out. So we run with time in a feverish and palpitating way as if it were a very hot nuclear potato. We need to become more creative in our concept of time. In reading, as in other areas, we need time for wonder, time for exploration, time for personal involvement, time to know and trust a teacher, time to identify self with others, time to know these "others," time to adjust to a school environment, time for people to find out about "me" in my environment, time to unthaw, time to express, time for the aesthetics of life, and a little less time for the mundane anaesthetics of drudgery and repetition. In fact, we have a critical need to learn what Jean Jacques Rousseau knew those long years ago when he said that in educating the young we must learn how to lose time if we are to gain it.

Thus, if reading is to be successfully assimilated, we must lose time by permitting a child to involve himself in some vitally penetrating experiences before enticing him into the abstract world of reading which is so highly dependent for meaning on those precious pre-learnings, on readiness, if you will.

Approaching time from still another vector, may I say that we need to stop making learning a timed dosage, a purgative, which involves going through so many pages, books, grades, courses, and, yes, degrees as if these hastened the peristalsis, the involuntary undulations and contractions of knowledge, toward an educational terminal point, and, for some, a drop-out. Education, including reading, must be taught and caught so that there is a passion, a fire, in the process. It must become a self-willed inner drive which acknowledges no termination of growth. And so that children may learn this concept rightly we, as teachers, must learn and be able to transmit this elan vital to the young. We are the ones who need to grow and glow and do our share of personal glistening. In this respect, it is worthy to note that Dr. Clark of Columbia University made an intensive and extensive study of the vital teaching factors in the classroom, and, after compiling endless stacks of research data, he came to the amazing conclusion that the greatest single force in the classroom is a teacher's personal enthusiasm.

A last consideration of time is that of apathy. Too much of school for too many pupils is an apathetic world of shadows, a world so discursive, so neither-nor, so utterly void of vitality as to be even less than a study in chiaroscuro, here is a bright spot and there is a mass of shaded obscurity. There are no bright spots; school is a maze of nondescript grey shadows sans substance. Thus, the drop-outs who are not counted as such because they are still in school are, in reality, the saddest statistical errors of them all, for although they have not been numbered among the missing, they are. These are the children, the youth, whose minds, not having been invited to stay in the classroom, quietly slithered out the door and whose bodies are just enduring the long, paralyzing torment until time will consent to release. Somehow, it has always seemed to me, that a most fitting commencement address for these pathetically apathetic ones who have finally drawn themselves to the stagnant brink of a mocking graduation would begin with Puck's last speech in the Midsummer Night's Dream. Remember?

> If we the shadows have offended,
> Think but this, and all is mended,
> That you have but slumbered here
> While these visions did appear.
>
> William Shakespeare

Let's stop the shadow play, the slumber, the apathy, the tedium, the monotony, the anaesthesia of learning, and let's start remembering that learning and reading are of value only when they can engender a passion for educating one's self. Then shall we know where our true responsibilities rest, for we shall be kindled by the charge that only the very best is good enough for the very young.

Yes, when children are given substance and not shadow, we shall not need people to speak on such topics as: Reading Difficulties - A Contributing Factor to Underachivement and Failure in School.

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RESEARCH FINDINGS AND FRONTIERS IN THE AREA OF EMOTIONALLY DISTURBED CHILDREN

John Pate

Those of us who teach disturbed children find ourselves constantly beset by those who would have us ignore all but symptomatic behavior. They insist that teachers of disturbed children should develop plans to extinguish, re-inforce, de-sensitize, de-traumatize, and reduce gradients.

With equal enthusiasm, other voices admonish us to think in terms of unconscious motivation and of deep-rooted personality alteration. They would have teachers plan to allay anxiety, vent hostility, reflect preconscious thinking, and resolve Oedipal conflicts.

Still another group, borrowing from economics, would promote the theory of games. They contend that we should plan in view of moves, strategies, pay-offs, and side-bets.

Now, all of these philosophies are sound. Each is based on painstaking investigation. Each is championed by its share of dedicated and distinguished scholars. Our problem is that all too often the varying philosophies are mutually exclusive, a bit too dogmatic, and of very little help in meeting classroom situations.

But for the teacher of disturbed children, one thing is clear. We need to know more about children who get tagged emotionally disturbed. We need to know how they differ from other children and how they differ from other disturbed children.

An analogy has been drawn between our present concept of emotional disorders and the nineteenth century concept of "fevers." So long as complexes of symptoms were grouped as one undifferentiated category, "fevers", they could not be diagnosed and treated separately. ---- Perhaps today we use the term emotional disturbance a bit too freely. Admittedly, the term is a convenient catchcall. It is handy for the layman and has some meaning for the uninitiated. But we should not accept the global concept too readily. Surely, teachers of disturbed children are not laymen -- nor are we uninitiated in the mental health field. We must be at least conversant in psychiatric nomenclature. We should shape at least some of our teaching plans within this framework. We should evaluate our work within existing diagnostic schemes, seeking to sharpen their function in classifying disorders. We should either do that or propose better ones.

With our present state of knowledge, we simply do not know enough to predict which discipline or which research activity will provide valid answers. Significant findings pour in from many field. Psychopharmacology and psychoanalysis, though distant in tactic and technique, have both molded theory and practice in dealing with emotional disorders. Epidemiological studies in our own nation and in other cultures have made an impact. And the teacher of disturbed children has an obligation to contribute. It is only logical that qualified specialists in the study and management of children's behavior, engaged in prolonged contact with disturbed children, can add substantially to our growing knowledge of emotional disorders.

And that body of knowledge is growing rapidly, and in ways which will assist the teacher in his daily classroom operations. Ranging quickly from the neurological to the quasi-philosophical, we can see that the fires have been set.

Research at the Indiana University Medical Center has increased markedly our knowledge of the effects of brain lesions on human behavior. By using ten tests in a neuropsychological battery, an impairment index was determined for each of more than two thousand subjects. The tests included measures of tactual performance, memory, finger oscillation, visual perception, rhythm, trail making, and aphasia examinations. Analysis of the data collected over seven and one-half years yielded highly significant results, and permitted statements of sixteen principles, all referring to the general question of the presence or absence of brain damage. When used in conjunction with recent encephalographic and neurological techniques, clinicians can differentiate with more certainty between youngsters who are brain injured and those who are not. Ideally this would lead to appropriate school placement. Brain injured children could then be placed in other special classes, and teachers of disturbed children could focus more sharply on emotional problems.

Improved classification systems, based on behavior descriptions and demagraphic data, are within sight, but you may have to use rose-colored glasses. In the months of October, January and April, thirteen Florida mental health clinics have been gathering data from all first admissions in the six to thirteen age range. Parents or parent surrogates supply demagraphic data and sort through 229 descriptive items, placing cards in "yes" or "no" bins. But this is only the pilot study. After all items and data have been subjected to factor analysis, plans will be modified, and the main research can be organized. Soon we may have a clearer indication of the social variables affecting emotional disorders. We may be moving toward a new sophistication in diagnostic schemes.

The Rorschach inkblot testing, which now constitutes the backbone of clinical psychological examination, is weighed heavily in diagnostic considerations. It is also used freely to give teachers special "insights" into their pupils' psychological makeup. But, with the postwar wave of doctoral dissertations came the gnawing realization that the Rorschach had psychometric sickness. Attempts to build a clinical instrument with projective qualities and psychometric soundness have resulted in the Holtzman Inkblot Technique. The Holtzman technique uses forty-five inkblots and restricts the subjects to one response per card. Scores on twenty-two variables are objectively scored and readily stored on IBM systems. Major variables in the Holtzman technique have the familiar projective flavor. They include location, form definiteness, color, shading, movement, and form appropriateness. At present, validation studies are lacking but the promise is there. A projective instrument which lends itself to scientific inquiry and which is still audible to the clinician's third ear will be of major import in understanding and diagnosing emotional disorders.

But we can not confine our interests to the study and inquiry explicitly designed for the mental health field. Indeed, it may well be that the most useful concepts, the best teaching tools, are being forged from other materials.

Consider briefly what sociology may offer, particularly in the study of small group interaction. How do particular individuals in our classes affect syntality of groups? What effect does de-individuation through group processes have upon the youngsters you teach? Do your observations suggest that these influences relate most closely to behavioral symptoms, or to defense mechanisms, or to diagnoses, or to anything?

Look to the field of perception -- or transactional psychology, if you will. Somehow each of us organizes a fantasia of sensory stimulation into a world of people and things, a world of joy and sadness, and of listening to academic addresses -- a world of life. But, do we react to these stimuli or react in anticipation of their consequences? How does our self-concept affect our view of the world of stimulation? Take one transactional axiom and toy with it: we resist reporting optical distortion in anything that is threatening, anxiety provoking, or unpredictable to us. Is this evidence of the Freudian mechansim of denial? Does it account for some youngsters' intolerance of ambiguity, for their reacting the same way in the face of varying social demands? Can it be used to help your students in reality testing?

Philosophy, theology, semantics -- every field has something to offer. The procedures you follow intuitively as a teacher today may be a principle tomorrow.

How do we find out more about disturbed children? How do we refine our concepts? Aesop's crow got his drink of water by dropping one pebble at a time into the pitcher to make the water level rise.

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WORLD CONFEDERATION OF THE ORGANIZATIONS OF THE TEACHING PROFESSION

L. P. Patterson

It is fairly evident to me that international organizations interested in our field exhibit more potential than accomplishment. It is therefore my intent today to: describe WCOTP briefly to you; discuss the role of the teachers' organization in the advancement of special education internationally; present some views as to what teachers' organizations can do on a world basis; and, examine some of the factors which are preventing full realization of our potential.

1. WCOTP

Let me quote from Panorama, one of the official organs of WCOTP.

The World Confederation of Organizations of the Teaching Profession (WCOTP) is composed of 120 national members and numerous associate members representing millions of teachers in 75 countries. Its purpose is to enable members of the teaching profession at all stages of education to exert an influence corresponding to the importance of their social function.

WCOTP has had consultative status with the Economic and Social Council of the United Nations Educational, Scientific, and Cultural Organization since 1953. It is a member of Unesco's NGO committee. In 1958 it established an office in Paris in order to maintain even closer liaison with Unesco. Since 1953 it has been a member of the Non-Governmental Organizations Committee on the United Nations Children's Fund. It has consultative status with the Food and Agricultural Organization and cooperates with other UN bodies whenever their work relates to education.

WCOTP has offices in New Delhi, Accra, Tokyo, and Paris, in addition to the head office in Washington. It publishes a quarterly, Panorama, and Echo, a monthly newsletter, in English, French, Spanish, and Japanese.

The N. E. A. is one of its largest affiliates and one of its strongest supporters. Dr. William Carr is the Secretary General of WCOTP.

WCOTP has had an active committee on the education of handicapped children for several years. This committee has had meetings in several world centers at the time of the Annual Conference and as a result of these meetings is presently, under the direction of Mr. John Brosnahan of Eire, tabulating a Questionnaire which elicited information from its members regarding the status of special education in the free world.

The responsibility for education rests upon various shoulders. It may be upon the church, the state as the ultimate good as in Russia, the state as a democratic product as in the U. S. A., the parent as in one of the school systems of the Province of Quebec, or the individual concerned as in too many places in the world. In no case do I know of the teacher as being the responsible authority.

There is, however, a strong trend toward the teacher accepting more responsibility in education either because he is a person deeply concerned in the welfare of others or because the parent is gradually withdrawing from his responsibility, or most probably a combination of these two factors. Some writers and teachers feel this is a calamity, but in any case, it is fact to be faced.

One might assume that the word "special" was not used above because of its inclusion under the general term "education". But this is not necessarily so. We all know examples of civilized communities, countries, perhaps even continents, where there is assumption of responsibility for education in general, but unfortunately not for special education in particular. It may well be that in our own area we have taken more responsibility than our brothers and sisters in regular classrooms but it is again true that we are not the sole custodians of this important right.

The place of the teacher is then clear. He is not the person responsible for education, and with this I would agree but he has responsibilities in education and particularly special education. He has responsibilities not only in his own school, or community or state, or nation, but also internationally.

He has responsibilities beyond those of the classroom, for not only is he an instructor, but he is also an "expert" and an expert in a democratic society has the responsibility to further the welfare of his society by the utilization of his knowledge in the formation and implementation of policy.

We must now express in practical terms the role of the teachers internationally.

First of all, he must utilize his organizational weight by belonging to his professional organizations. He must see to it that the proper committees are established, and kept strong. He must be sure that these committees develop ideas for presentation by the parent organization. He must see that these presentations and representations are carried out.

What are some of the things that a professional organization of teachers in special education can do? I would suggest the following:

(a) Official representation to the United Nations and UNESCO, WHO, and various foundations.

(b) A clearing house for information;

(c) Hospitality to those who want to see actual programs in action;

(d) A project on an international definition of terms; and

(e) The development of international seminars.

What are some of the factors which are inhibiting the development of these ideas and others?

I would first of all cite the lack of permanent staff assigned to these tasks. Most of us have limited amounts of energy and time which can be devoted to good works outside of our jobs. And a goodly share of these amounts must be devoted to neighborhood projects. We can have ideas. We can suggest. We can stimulate action. But to carry on a worthwhile program within the limiting factors listed below really requires full time services of competent people.

There are limitations of communication. Letters, even airmail, take time. There are language problems, although others usually and courteously make up for our laziness by studying English. There is the inhibiting factor of distance, although this is a conditioned thought habit rather than a fact, for when you leave New Delhi one evening and arrive home in Montreal the next, you are not very far away.

We must realize that these limitations are psychological rather than real. They have been overcome by the rapid advances in transportation. We must adjust our thinking to fit a new world of many nations, many tongues, many problems, many solutions, but one desire, the desire to live peacefully in a better world.

When we see clearly the paradox of great diversity coupled with a singleness of thought, we will at the same time be encouraged to further the cause of education, both general and special. But as we further education we must be prepared to meet greater challenges. This is an expanding spiral we are starting. And as the spiral of general education expands so will the education of the halt, the blind, the deaf, and the disabled. Let us be ready not only with encouragement but also with good works.

One should raise at this moment the criticism of over-lapping of interest and energy. For example, I am a committee member for doing similar work for three international organizations. Would it not be better for two of these to withdraw, so that one could function more efficiently and effectively? My views are not too fixed, for I am moving toward the position that each should continue There is the stimulus of competition. There is the pride and enthusiasms, which each gets in its own project, which would not likely be transferred to another. There is still plenty to do. No, I do not feel that the time has yet come for any to withdraw but rather that the accomplishments of each add up to a total greater than the sum of the parts. Let us each continue and extend our good work!

Perhaps the greatest problem is the one we all have at home, the need to convince our professional associates and the general public that our work is worthwhile and not a sanctified charity; that what we are doing is the democratic right of every child; that it is purposeful education; that it is not bizarre nor queer but normal, happy work; that we are not divinely ordained but ordinary mature humans performing a vital task for the benefit of society as a whole, as well as for the individuals concerned. When our own public image is undistorted, we will have less trouble doing those things which must be done in international affairs.

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BASIC ORIENTATION AND MOBILITY SKILLS FOR YOUNG BLIND CHILDREN

Ralph L. Peabody

After beginning to actively think about and plan my presentation for today, two N. E. A. publications arrived at my home, merely by virtue of various departmental memberships. I mention these, as in a sense they present a theme worthy of our consideration today. They are, Freedom to Move and Perceiving, Behaving, Becoming. A New Focus. What could be more pertinent for a teacher with my assignment, than to look at it with challenges such as these in mind?

I feel that an intensive review and a study in greater depth of basic theoretical knowledge as it relates to orientation and mobility is mandatory. We should look back to our child growth and development studies to realize fully the importance of the fundamental need of the child for Freedom to Move, and how through movement and play a child is learning to control and work through space.

Another broad factor which must rank prominently as a knowledge of the teacher is that of the psychological needs and developmental patterns of the child. A teacher must have some basic understandings of the forces effecting and/or contributing to the personality and perceptual structure of the child, and the formation of his self-concept or image, to adequately appraise and understand his needs and attitudes. This includes an awareness of the prevailing family and community attitudes, and their influence on the child's growth patterns. We must also have some understanding of the numerous motivational forces working in the production of the child's basic needs, such as adequacy, competency and self esteem, and the roles frustration and environment have played.

In our examination of psychological forces, it is imperative not to underestimate our own influences as teachers. To the extent possible we should understand our own perceptions of blindness. We should intensively indulge in some directed self-examination to determine our real feelings toward mobility and the real goals of our educational programs, as we perceive them.

The above theoretical investigation is most effective while the teacher is concurrently learning the more practical elements of orientation and development of mobility skills. The word "learning" is used here in its most kinesthetic sense. That is - learning orientation and mobility skills under the direction of a trained qualified orientor while experiencing "blindfoldedness." Sedentary pursual of this subject through books and discussions is not sufficient and does not result in the necessary perceptivity requisite of a good teacher.

In an investigation of this nature the teacher will want to learn the relationship between mobility and orientation, and to discover by "doing" the dependence of mobility upon orientation. As the teacher encounters first hand specific techniques which provide more effective and safer functioning in the environment, a new level of appreciation for basic skills will be attained. A more significant comprehension of the nomenclature of mobility will be realized as the teacher actively participates in such techniques as following a sighted guide; trailing; movement with hand and arm across the body; location of dropped objects; bending over with the knowledge that the face is protected; and so on, while advancing on into the actual use of the long cane, and its particular set of techniques.

Through active participation the delicate yet potent cues and clues of the environment become significant and meaningful. We can then comprehend such ideas as the way in which an object in our course of travel, may have at one time been considered an obstacle, but may actually be an aid in orientation. An awareness is developed which can vastly effect our own teaching techniques. These sensitivities and skills are the rewards we expect from subjecting ourselves to this process, as well as an intimate acquaintance with all three basic methods of travel and the tools and training peculiar to each.

In addition we experience another primary influence. Through our continuous contact with a skilled orientor or mobility instructor we realize an appreciation and respect for this professional person, and for his particular contribution and responsibility. We can then see how and where he fits on the continuum in the education of blind children. We also begin to visualize the many facets of this area in which orientor and teacher can work together, and are necessary to each other.

Limitation of time has necessitated the rather cursory treatment of what I have considered some of the prerequisites essential to understanding orientation and mobility. However, even without development of ideas, some positive feelings for the previously cited elements seem imperative to me if we are to view this subject in perspective and to appreciate its comprehensiveness in relation to children and education.

In as much as basic orientation skills begin in the crib with the baby, let us begin at that point. Many of us are not fortunate in having agency, pre-school counselors or social case worker's assistance, and have discovered the first non-medical contact parents have is often with teachers.

As a result of early contact, we establish a rapport with parents which carries on for many years. The "team feeling" is reinforced as the child progresses through the many stages of normal growth and development. Finally we come to the time the child is ready for formal travel training with a trained orientor. We are then in a position to assist the orientor in further interpretation to the family which will insure their cooperation which is felt to be a necessary ingredient as the child learns more about independent travel. At this time too, our knowledge of the tools, the long cane and the guide dog, places us in a strategic position to assist the family and the child in arriving at a decision of the proper tool to meet the individual demands of the situation.

I do not wish to imply that all our relationships with parents should center around orientation and mobility. I merely wish to impress upon you that this is an additional aspect, or facet worthy of much consideration.

With young children, we are currently giving more attention and thought to the incorporation of more meaningful experiences into the present program. For example, the use of such words as top, as it means the top of a page, or the top of the table, or on top of another, or the toy top, and the multiple uses of the word "edge", and many other expressions are all coming under our greater scrutiny to produce clarity. For another example, how many of you have had that exasperating and frustrating feeling when directing a young child to turn right, to see him turn completely around two or three times? But remember, Teacher, it was to the right. ----

We have found in our particular program that more emphasis on physical fitness, and moving about as a group, so the young children together can discover the cues given off in the environment, prepares them rapidly for independent travel within the environs of the school. It is of continual amazement to me to realize at what an early age the children want to navigate the school alone, after learning some basic methods of protecting themselves. Only slight resistance was felt from the regular classroom teachers, following the initial shock of watching children travel independently. But this acceptance was directly the result of carefully planned interpretation by one of the resource teachers. This continual interpretation to others is a basic responsibility of the teacher.

As the children progress through the grades, we attempt to present challenging situations which encourage good mobility and effective use of the environment, which is of course ever widening. I can honestly say, yes, this is very time-consuming to the teacher, but believe me, rewarding. We at present have several children who seem "map-starved." I have not as yet been able to keep ahead of them, nevertheless when I see the way they utilize schematics of floor plans, and produce their own neighborhood maps, I know they will not be home-ridden adults, if they have the opportunity for continued growth and if we are able to provide good mobility instruction from a qualified orientor.

In summation, to respond to my assignment for today, I cannot view orientation and mobility without also viewing as it were, the children, their families, the community, the school program, and what it stands for, and myself. Certainly I have additional responsibilities as my own perceptions grow in relation to the "moving out" processes. However, I personally find great satisfaction and an even greater sense of challenge since I am able to view a blind child and his environment as a single unit.

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PROGRAMS AND PROCEDURES IN HOME TEACHING

Marguerite Rapson

Reporting in a meaningful way on programs and procedures for the homebound is difficult for a number of reasons. First, each program is so highly individualized that what might be successful in one situation could be quite inappropriate for another. Next, one's own experience is relatively restricted unless he happens to be a state consultant; and finally, resources for studying the field are limited.

There is no substantial body of professional literature available. The newsletter of Teachers of the Homebound reflects the interests, problems, and suggestions from many parts of the United States and Canada, but has only been available for five years. Research studies have been confined to a few investigations of psychological aspects -- adjustment, basic intelligence, and academic achievement.

In addition to literature and research, one might turn to state laws which reflect to some degree status of programs for the homebound. Conferences, another resource, are not frequently reported in written proceedings.

The last resource -- teachers themselves -- appeared to hold more promise for identifying problems of program and procedures.

This report will attempt to sketch some guiding principles for developing sound programs and will present ideas and reactions of teachers of the homebound.

1. Principles

A comprehensive program for the homebound may be assured by following a few basic principles. They are as familiar as the Pledge of Allegiance but until we fully implement them we must continue to restate them and work toward their fulfillment.

A. A program must be based upon a philosophy which recognizes:
The worth of the individual

The importance of education
The right of each child to an appropriate education

B. If local schools fail to provide adequately for the homebound, laws may be developed at the state level. Such laws have direct bearing on the amount of service offered, qualifications of teacher, financial support.

C. The place of the programs in relation to general education in a school district should be clearly established. This has implications for organization and administration, supervision, curriculum, instructional materials, benefits for the teacher. Financial responsibility and supportive services are also implied.

D. When the program has official status as an important phase of education, cooperation with the medical profession and community agencies is enhanced.

E. Competent, enthusiastic personnel must carry on this challenging program.

F. All other possible resources for a child should be considered before resorting to home teaching - whether the youngster's disability is of a severe chronic nature or only temporary.

When programs are developed according to these principles, many problems are avoided or minimized.

2. A questionnaire was sent out to teachers of the homebound in Michigan to obtain a more comprehensive picture of the program in many types of communities. Ninety-nine were distributed and 56 returned. The questionnaire, containing 30 items, was built around the concept that education of the homebound has three distinct aspects:

Communications and Procedures within the school system

Communications and Procedures within the home

Communications and Procedures involving the medical profession

A fourth group of questions, having five items, encouraged the teacher to identify her problems as a person - preparation and certification, support from the administration, and the like. Teachers were invited to indicate those aspects of their work which give them special concern.

The items most frequently identified as problems were:

Providing instruction in areas in which one is not prepared to teach - 27 responses.

Obtaining instructional supplies - 22 responses.

Maintaining social contact with peer groups - 21

Providing instruction when lab facilities are needed - 21

Obtaining prompt referrals (for both school and medical personnel) - 18

Number of children assigned to a teacher - 18

Availability of special services in Art, Music, P. E. - 16

Of equal importance, perhaps, are the items not identified as problems. Only two responses indicated lack of support or interest from administration and three reported difficulty in having work recognized and credits granted. Interpreting service to parents was of no particular concern. Returning child to regular classes had six responses as did use of home-to-school telephone service. Records of children received eleven responses.

Additional comments had to do with obtaining supplementary help from volunteers for crafts and recreation, carrying A. V. equipment, and making realistic plans for severely handicapped pupils. Several protested the placement of mentally handicapped or emotionally disturbed children on the homebound service. Several commented on the increase of referrals of pregnant students.

Time does not permit full discussion of the problems but a few practical suggestions may stimulate additional ideas from other participants.

The most acute problem, that of the range of subjects to teach, probably focuses at the secondary level. Some possible approaches include:

1. Hiring special tutor for just the subject the regular teacher of the homebound is unable to handle.
2. Utilizing home-to-school telephone.
3. Utilizing educational T. V.
4. Cooperating with regular teacher of the subject and serving more as liaison person than actual instructor.
5. Considering various types of programmed learning.
6. Postponing course to another semester or year when it could be taken in school.
7. Using qualified volunteers available in the community.

Obtaining instructional supplies should not be too difficult if the teacher of the homebound is recognized as an integral and important part of the total school system. Materials, then, can be obtained just as they are for the fourth grade at Lincoln School or Biology class in the High School. Service clubs are frequently interested in purchasing the "extras" for exceptional children. Audio-visual aids, home-to-school telephone, S. R. A. reading materials orStructural Arithmetic might be supplied through such interested groups.

Attrition of self and vehicle could be minimized if school systems would provide vehicles appropriately out-fitted for the job. Tape recorders, record players, projectors, typewriters, science kits, crafts supplies can be carried more easily in a carry-all with built-in storage facilities. The equipment, itself, fares better when it does not bounce around in the trunk of a car. The advantages to the teacher are obvious! No school system questions the need to provide classroom space for children. Why should there be reluctance to purchase a vehicle which, in a sense, takes the place of a classroom?

The quality of teachers working in this important phase of education is demonstrated by many enthusiastic comments. One individual wrote - "This is my first year in homebound and I love it. Over twenty years of teaching in both regular and special classes helps to solve many small problems that arise." A supervisor wrote - "Our teacher of the homebound and I reviewed the questionnaire together. Our teacher has been such an outstanding teacher that we have not had the problems which might arise otherwise. This is such a big public relations responsibility the person doing the work should be very carefully selected. The impact on the community which the homebound teacher exercises is terrific! We've been very fortunate to have Miss D."

Summing up the spirit of many of the responses, one teacher wrote -

"I thoroughly enjoy my work. While there are many problems, there are many rewards which come from individuals who have little opportunity to know much about the world in which they live."

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LISTENING TRAINING EFFECTS ON THE COMMUNICATION OF MENTAL RETARDATES

Bernard B. Schlanger

Investigations during the past 10 years have indicated that while retarded populations exhibit a greater incidence of hearing loss from that found in normal populations, these incidences have varied from 12 to 50%. These variations are understandable since mental retardation is not an entity. First of all, a wide distribution of etiologies, intellectual levels, and behaviors is subsumed under retardation. Secondly, criteria for hearing loss vary and testing procedures differ. Thirdly, examiners have not usually repeated their hearing tests nor offered other tests to ascertain the reliability of their measurements. Training in responding has usually not been attempted.

If we conceive of retardation as a dynamic rather than a static condition, it is possible to remedy unfavorable attitudes affecting listening which might in turn permit us to obtain hearing responses closer to the mental retardate's potential acuity.

Much of hearing testing involves a conditioning process which is based on normal learning patterns. This experience may be beyond the capabilities of many retarded subjects without suitable listening practice.

An investigation was conducted at West Virginia University under the Cooperative Research Program of the U. S. Office of Education to evaluate the hearing ability of mentally retarded children with a battery of hearing tests which were to be presented at three spaced intervals. The Stanford-Binet and PPVT were also given at initial and final intervals. During the period between initial and final testing a progressive listening training program was offered. The project thus added the elements of depth, time and training to ascertain whether a true hearing loss existed in retarded subjects who responded initially as though there were an organic loss.

Procedures

Subjects. From an institution 368 subjects, and 32 from special classes were investigated in terms of suitability for audiometric testing. Only 199 of this total of 400 appeared to be capable of responding to audiometric screening. Selection of subjects for the experiment from the remaining 199 subjects was made on the basis of failure to respond adequately to two of four frequencies (500 to 4000 cps) at 30 db in either ear. ---- After two audiometric screening, 65 subjects, approximately 33% of those screened, failed the test under the established criteria. These subjects could be described loosely as "trainable." The mean CA was 15 years, 7 months, (SD 4-2); the Binet MA was 5 years, 1 month (SD, 2), the Binet IQ 36.4 (SD 13.4). Etiology for mental retardation was not explored, but brain damage was readily discernible in many. Eight were mongoloids.

Hearing Tests A battery of six hearing tests was given. Each one required different responses. Three pure tone tests using frequencies 500-4000 cps were given. Responses included hand-raising, designated as standard audiometry, ear-choice, or pointing to the ear in which tone was heard, and play audiometry which consisted of placing rings on an upright peg when tone was heard. Bone-conduction testing utilizing hand raising was also given. The fifth test was psychogalvanic skin response (GSR) audiometry. The final test administered was a speech reception threshold (SRT) test consisting of 12 spondee words represented by picture cards. Four each were mounted on a panel. After live presentation practice, the words were presented via tape through an audiometer.

Listening Training Program. A listening training program of 30 units was offered. The program continued for a period of seven months after initial testing.

The program included:

1. Conditioning exercises in auditory test-taking (Lessons 1-6).
    a. Methods used included free field tone at high intensity to which subjects responded with a gross movement, striking objects, standing, jumping, ringing bells, et al.
    b. Differentiating tone at different intensity and frequency levels and responding with varied structured activities.
2. Exercises in increasing subject awareness of sound and teaching sound recognition, discrimination and auditory memory ability for gross environmental sounds. Taped animal sounds, bells, toy music instruments, and other noise producers were used. Gross motor activities were at times required, feeling and seeing the source of sound were utilized. Other activities included matching with pictures and even producing noise (Lessons 7-12).
3. Localizing sound was practiced at this point (Lessons 13-20).
4. Rhythm patterns followed and immediate recall and memory for rhythms produced by toy drum and other toy musical instruments were practiced. (Lessons 21-22).
5. Responses to memory for verbal command were used (Lessons 23-26).
6. At about the 25th lesson, all the subjects spent 15 minutes preceding the lesson listening to music via ear-phones played through a group hearing training device. Such instruments were used as audiometers, auditory training units, a Bell Telephone Educational Unit and other devices which presented an auditory stimulus with a required response.

At each lesson, the preceding lesson was reviewed. Throughout the activities were made pleasurable. An added feature was a choice of a tangible reward at the completion of each unit.

Results

Lowered thresholds occured in all of the tests with the exception of the SRT test. In terms of statistical significance, the data indicated that GSR threshold changes were real at a 1% level of confidence. The best results in terms of low readings and consistency of readings were obtained with the SRT. Subjects who would not respond satisfactorily to the other tests, were testable by this more concrete method.

Using direction of change as a means of comparing individual threshold changes, it was seen that most of the subject obtained lowered thresholds. These changes were found to be significant at a level of confidence of less than 1% in all tests, except for the SRT in which it was surmised that valid responses were obtained initially in most of the subjects.

In re-examining the incidence of loss, using the *standard* audiometric results as an example, it was found that the decrease in incidence of hearing loss from screening to final testing dropped from 33% to approximately 9% of the subjects.

The Stanford-Binet and Peabody Picture Vocabulary Tests administered in initial and final test periods showed a change in seven months in the Binet MA mean with an increase from 61.4 months to 65.1 months. The PPVT mean MA, initially, was 52.9 months and, finally, 56.4 months. These changes, using the *t* test, were found to be non-significant. The gains, however, viewed empirically appear larger than one would anticipate in a group whose mean Binet MA was slightly over 5 years and whose mean IQ was 36. Changes did occur in a positive direction at a probability of less than 1%.

Communication Interaction. Judgements were made by three of the examiners on communication interaction as affected by training in the program. The subjects were judged on a zero to five scale in which zero represented poor communication responsiveness. A change in responsiveness was indicated statistically at a probability of less than 5%.

Discussion

There are limitations to the amount of improvement you can expect among trainable retarded subjects in such measuring devices as auditory thresholds and intelligence scores. There are also limits to the amount of improvement in verbalizing. Such factors as static or progressive neural pathology, sedation, personality disturbance and others exerted some continuing effect during the training and testing. Since the group consisted of a selected sample of retardates who demonstrated hearing losses, mean variations would be minimal. There were four subjects, for example, with hearing losses from severe to profound.

The effects of listening or auditory training did show a reduction in auditory thresholds, but, as noted before, not a statistically significant change except for one test, the GSR test. The direction of change was significantly positive in both audiometric and intelligence tests.

The decrease in incidence of hearing loss from 33% to less than 9% is also indicative of the unreliability of initial auditory assessments of some mentally retarded populations. These reports indicating high incidences of loss may have accepted initial contact responses as valid.

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Results of a thorough hearing testing program permit us to alert others examining the retardate concerning the nature of his auditory disorder if there is one. It also permits improved individual programming in communication therapy with prognostic goals clearly visible. Since listening training is part of speech or communication therapy, we now know the receptive factors contributing to the speech performance of this specific group.

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THE ASSESSMENT OF INTERACTION DYNAMICS IN GROUPS AND BETWEEN INDIVIDUALS

Boyd V. Sheets

The story is told of a superintendent of an industrial school who was heard to speak rather grandly about the amount of group work being conducted in his institution. According to the superintendent, the children marched back and forth to assignments in groups, they were in classroom groups, they ate together in groups and had group recreational activities. Based upon this schedule he said, "Yes, we do a lot of group work up here."

This opening comment is not made in derogation of attempts to facilitate interaction between groups of individuals, but rather to point up the fact that we are apparently becoming increasingly aware of group therapy as an important clinical tool. It seems to represent a professional challenge to all of us who work directly with human beings, particularly children who present some type of handicapping condition. Our point of emphasis, in meeting the scholastic and habilitative needs of these children, is moving beyond the environment where we provide them only with the obvious tools to use in meeting the rigors of life -- the academic armamentarium of reading and writing and arithmetic and geography and history, the braces and wheel chairs and surgery, the speech drills and hearing aids, and all of the many other things we can give the child for his future benefit. Without for an instant underestimating the importance of all these areas of habilitation, we have apparently not been satisfied totally with our efforts and we have been moving -- each in our own pattern -- toward the inclusion of the total child in our work, including increasingly what Hinsie calls "the person in the body." This is as it should be. We are recognizing increasingly that one cannot treat part of the body or mind in isolation, and as a corollary to it, one cannot rear a handicapped child in a sociological vacuum. Within certain limits imposed by accidents of nature, the child prospers best when he is allowed to grow and learn and interact with people around him.

At the same time we are nodding approvingly at the idea of professional persons becoming more alert to the importance of behavioral dynamics in their various duties, we are not suggesting that we must become specifically trained as clinical psychologists or that, having taken a few courses in psychology, we fancy ourselves in that light. Nevertheless, to the extent that our every act and attitude has some sort of an impact upon the children we deal with, we cannot know too much about the dynamics of human behavior. Also, inasmuch [illegible] the area of group therapy has developed remarkably within recent years, there is much greater likelihood than ever before that our own daily work will come in contact with it in some form. For example, much of our current efforts to help parents of exceptional children is done through group therapy, frequently under skilled and effective leadership.

In this discussion, our efforts will be directed at reviewing some of the more obvious problems inherent in group psychotherapy, as well as calling attention to one specific method of assessing the results of group therapy.

Dynamics of Group Psychotherapy

According to Corsini "Two views exist about group psychotherapy. The first is that it is a diluted, more economical, less effective method than the individual procedure.

This view is not usually shared by group therapists, who see the group method as a more complex, more difficult, more natural, and equally effective procedure." Even while we are entertaining this disagreement in philosophy, it would be important to turn to a consideration of what group therapy actually is. Hill has approached the matter conversely by stating a few things which group psychotherapy is not. In his opinion, it is not church social groups, it is not human relations training groups, it is not Boy Scout groups, or social group work or psychodrama groups.

It is generally agreed that several criteria must be satisfied before group psychotherapy can be said to be in process: 1. There must be what Collay calls a Primary Group -- a small, face-to-face group; most group therapists prefer from eight to twelve persons. 2. The group meets regularly or fairly regularly. 3. The membership of the group has a fairly stable composition. 4. There is a therapist working with the group. 5. There is a purpose to the meetings, although they may not always be stipulated.

From this set of criteria, you will note that many of the gatherings we might be inclined to designate as group therapy sessions would not meet all of the requirements. This, however, is not to say that much effective psychotherapy could not be accomplished in environments which may have other primary purposes.

To the uninitiated group therapy looks easy. All one seemingly needs to do is gather around him a group of persons with some sort of common problem, provide them with a circle of comfortable chairs to relax in, and then set them to talking. Hopefully, through the process of permissive environment and much uninhibited unburdening of the collective souls, problem solving will take place, and the group will soon have been made whole again.

To the therapist who has had extensive experience in the group process, it is anything but easy. Back, for example, writes that " a group therapist not only must know how to recognize the dynamics of transference and ego defenses but must master an additional skill. He must be able to recognize, reflect, and interpret that set of psychological forces operating in group situations which the late Kurt Lewin started to investigate under the label of 'group dynamics'."

What, then, are some of the interactive forces which challenge the group therapist in his work? What things must he watch for in order to help the group move forward? What should his own role be in guiding the group back to improved mental health? Let us look briefly at a few of the factors which merge into the totality of group therapy.

Group Composition. Much thought and work have been given to the problem of how a group should be selected. Should they all be of the same age, sex, and problem category? Are there persons who could not profit from group therapy and should, therefore, be excluded? Are there behavior problems which are not effectively treated in the group environment? Naturally, there exists no final answer to these questions. However, a number of answers have been postulated. Hill believes, for example, that when children are seen in group therapy there should be some similarity of age level. This factor appears not to be crucial with adults. In terms of the nature of the behavioral problems, Hill has found that at least a moderate degree of heterogeneous grouping is best. Where groups are made up homogeneously with respect to behavior pattern, the members tend to reinforce each other's attitudes and thus delay forward progress.

Group Development. Lewin has said, "You can't have healthy people until you have healthy groups." All of which points to the fact that a group must accomplish actual therapeutic work if health-promoting factors are to be maintained. This pointedly differentiates the therapy group from the idle chatter in which we humans appear to engage so often. Over a period of time the group members must develop through various psychological stages, each important in its own right. For example, we tend to think that group therapy consists primarily of unloading our individual problems and frustrations before an audience. Such ventilation occurs very predictably and serves an important purpose, however, it is certainly not the end goal of group therapy. Unless insight developes and the individual is able to put his emotional growth to appropriate tests, very little has happened.

Therapist Style. Another important dynamic which influences group therapy resides in the person of the leader. There is some inclination for many of us to see the therapist as an easy-going person who sits back comfortably and rather passively plays the role of group moderator. Such is not the case in actuality. Of course, the therapist ordinarily guards against acting like an authoritarian prima donna. An obvious display of his abilities and skills would serve as an obtrusive deterrent to group development. At the same time, his is certainly not a passive role. He must know a great deal about the individuals who make up this particular group and be aware of the manner in which each person is participating. He must have some notion as to the therapeutic level which this group might logically achieve, and the distance it has currently traveled. He must continually be sensitive to interactions within the group -- group processes, group tensions, the general therapeutic climate. He must decide if individual problems coming up for discussion are also problems of the group. And, very importantly, he must be aware of the impact of his own personality upon the group and upon group development. There is good reason to believe that in some cases, the forward progress of a group is impeded by the inability of the therapist to lead the group into the more intricate depths of problem solving. In such cases the work of the group plateaus off and the members soon become bored.

All of the factors we have mentioned as well as many more compose the dynamics of group therapy. There are emotional factors, such as acceptance in the group, altruism and transference. There are intellectual factors which include universalization, insight and spectator therapy. There are action factors, such as group interaction, catharsis and reality testing. There are Bion's frames of reference which, in addition to actual work by the group, include flight or fight tendencies, pairing, and dependency.

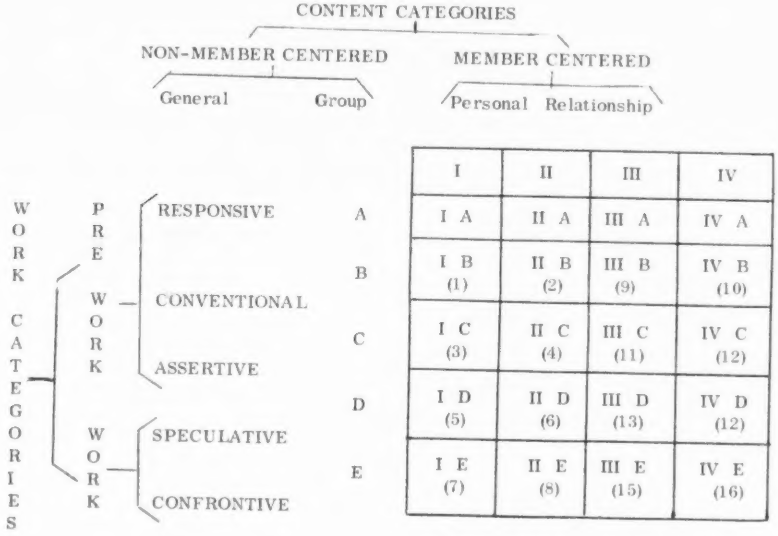
One could easily see where, with all of these many dynamics of group therapy obtaining -- often in overlapping fashion -- the most capable therapist could become momentarily lost in the morass of psychological detail. All of which points up the need of an instrument which will allow the therapist to assess the amount of therapeutic work being accomplished by the group at any given time.

Over a period of years numbers of group interaction systems have been devised, including those of Bales, Steinzor and Carter. In order to render effective information, such an interaction system should be productive of an array of information: 1. It should allow for a categorization of the group for intergroup comparisons, e.g., the level at which a given group is functioning therapeutically. 2. It should allow for a chronological charting of group development, that is, is the group moving forward over a period of time, or merely maintaining a status quo? 3. It allows for a charting of an individual meeting of a given group. For example, it has been found in charting numerous group sessions that there is a tendency for groups, during a given meeting, to engage in a warming up period initially, followed by a period of therapeutic work, with a return to a non-work status at the end of the hour. 4. The interaction system should also allow for a study of individual members, or the therapist.

Hill-Hill Interaction Matrix

One of the potential problems which faces any producer of a rating scale -- particularly those which propose to rate human behavior -- is one of sheer complexity. Some otherwise excellent scales have fallen by the wayside simply because they were too cumbersome to deal with clinically. Since 1956 Dr. William Hill and Dr. Ida Hill have been working to develop an interaction scale to be used with psychotherapy groups, which would satisfy the criteria of brevity and clinical usefulness at the same time being statistically valid and therapeutically meaningful. For the most part their work has been conducted at the Utah State Hospital, some of it under the sponsorship of the National Institute of Mental Health. In arriving at their present status of evaluating group procedures, the Hills observed, recorded and studied verbatim transcripts of hundreds of group meetings. Their explorations have led to the development and partial discarding of numerous rating systems. The present form of the Hill-Hill Interaction Matrix is composed of twenty cells, functioning in two dimensions, and proposing to encompass the entire array of behavior which takes place in group therapy situations.

The two dimensions which make up the matrix have been designated as "Content" and "Work" categories respectively. An inspection of the diagram will reveal that each is broken down into sub-categories. The Content categories are classified under four headings - General, Group, Personal and Relationship. In turn the Work categories are made up of five sub-groups - Responsive, Conventional, Assertive, Speculative, and Confrontive. When these sub-categories are overlaid, the twenty resultant cells represent the combination of the various degrees of therapeutic work which is possible, and the variations in response which comes from group members. For convenience purposes each cell bears a code number reflecting both work and content categories. Also, with the exception of the cells under the "Responsive" column, each cell is assigned a number which indicates its relative weighting in terms of therapeutic work being accomplished by the group.



	I	II	III	IV
A	I A	II A	III A	IV A
B	I B (1)	II B (2)	III B (9)	IV B (10)
C	I C (3)	II C (4)	III C (11)	IV C (12)
D	I D (5)	II D (6)	III D (13)	IV D (12)
E	I E (7)	II E (8)	III E (15)	IV E (16)

Hill and Hill Interaction Matrix

At this point, it would probably be wise to refer specifically to the cell grid and illustrate the various types of behavior which would come under representative of the cells. On the left-hand margin of the grid you will note that the "Work Category" has been broken down into "Pre-Work" and "Work" sub-groups. Hill feels that therapeutic work is being accomplished only when the group has as its goal the promotion of self-understanding, where someone is taking the patient role and others the therapist role. Where other types of group activity are taking place, it is classified as "pre-work." These include the Responsive, Conventional, and Assertive categories.

Responsive ratings are usually given only in groups composed of regressed patients such as one finds in a mental hospital or training school for the severely mentally retarded. This category is characterized by the need for the therapist to sponsor any comment or statement made by individual members. Because one finds this relatively low-level type of response relatively infrequently, this group of cells is often omitted from consideration in the Hill and Hill Matrix. As an example of I-A responses, where general interest topics are discussed, the therapist might ask a patient, "What did you have for breakfast this morning?" To which the response might be "I think we had mush." Whatever the content category might be on the responsive level, the therapist must characteristically elicit the patient's response by probing or questioning.

Conventional Responses. As the name implies, Conventional responses under cell I-B are characterized by behavior that is socially appropriate for any type of unstructured group. The interaction may be so devoid of any content that it is made up primarily of pleasantries and amenities. However, it does perform the important function of maintaining the group. Illustrative of this level interaction would be the following: "Hello! It's nice to have you back." "Good to be back." "I'd like you to meet John Lowe." "How do you do."

When one moves over to cell II-B there is evidence that while responses are still conventional, the speaker identifies with the group and his remarks come out of a feeling of dissatisfaction with some aspect of the group's operation. Something like this might transpire: "Who's going to begin today?" "Why don't you start?" "Oh, I started last time. Somebody else do it."

Under cell III-B the interaction is still descriptive of behavior that is socially appropriate for any group. However, under this category the interaction always has as its topic a group member and usually revolves around the member's actions, his problems or his personality. In other words, for the time being one of the group members becomes the "topic-person" upon whom primary attention is focused. For example, the following dialogue might take place: "I'm originally from California, but I've lived here in Utah for over 40 years." "Did you come from a large family?" "Yes, I'm one of nine -- four boys and five girls -- that makes me the sixth."

When we reach cell IV-B the group members are demonstrating their interest in establishing relationships with each other. The distinguishing characteristic of IV-B is the attempt by the group to make the relationship visible and the climate friendly, while subject matter, if any, remains secondary. Therefore, something like this might take place: "Boy, look at that sharp new suit!" "Where did you get it?" "My wife bought it downtown the other day." "I've never seen you looking so good -- kind of like a banker!" "Glad you like it."

Assertive. Moving down the grid -- still on a pre-work level -- we come to the assertive category. This work style is characterized by argumentative, hostile, or assertive statements. Under I-C the speaker states his position in an argumentative fashion - as if his mind were made up as he speaks of general interest topics. What results might be justifiably called a gripe session. Thus, statements like the following might be made: "Of course the President has to take the blame for that fiasco!" "I get sick and tired of hearing people blame mothers for everything their kids do wrong. It isn't fair!"

Moving over to cell III-C we have assertive behavior which is linked with a topic-person in the group. Here the topic person might say, "If they think I'm going to stay in this snake pit for the rest of my life, they're crazy!" "Why should I admit I'm sick just to please you? I'm perfectly all right."

Speculative. Having sampled briefly the nature of assertive type behavior, we come now to the first of what Hill has designated as a therapeutic work level, namely the speculative category. In cell I-D the speculation concerns itself with general topics but on a work basis. There is an exchange of opinion and information much like that heard in a discussion group or classroom where the participants are seeking to gain knowledge or clarify their thinking about topics related to mental health. For instance, one group member might say, "Is there such a thing as a mentally healthy person?" "I have heard that everyone is neurotic in certain ways." "That isn't what I mean. What are the signs of a mentally healthy personality?" "Someone whose healthy impulses win out over his unhealthy ones -- something like that?"

By way of contrast let us move over to cell IV-D, still on the speculative level, and see what might happen in a group functioning within this category. Here we would find statements or questions that consciously promote an exploration of the relationships among members or between one member and the group as a whole. For instance, one group member might momentarily assume the therapist role and say, "I suppose I react negatively to you because you are so much like my sister." Or, "Do you suppose I can't talk in here because I'm afraid if I do you won't like me?" Here the speaker is attempting to understand his relationship with other members of the group by recourse to speculative interpretations.

Confrontive. The highest level of therapeutic work under the Hill and Hill Interaction Matrix is the confrontive category. This level is characterized by a penetration to the significant aspects of a discussion, and because of this penetration, these statements confront members with aspects of their behavior usually avoided.

Taking cell II-E as one example we find behavior which is typified by statements or questions which analyze, diagnose, or suggest solutions for group process problems. Thus, a group member might confront the group with some observations about its behavior: "Ever since I joined the group I've noticed that the women agree with the women and the men with the men on practically every issue. Maybe this kind of thing keeps us from listening to the things we really ought to hear." Or, a member might confront the group with its failures: "As long as a person doesn't say anything, we let them go. We just won't take the initiative to help anyone in this group. Mary tried to kill herself, but did we ever try to reach her when she was here? No, we failed her!"

The most productive level of therapeutic work comes under cell IV-D. Here we find statements on questions in which the speaker takes the responsibility for calling the group's attention to behavior which documents or illustrates a relationship between members that could be profitably explored, or for reporting reactions of his own to the behavior of another member or to the treatment he receives at the hands of the group. Thus, the speaker may sponsor himself into a topic-person status and say, "Lawrence, whenever I ask you a question, you answer like you were sore at me. Do I say things in a way that is belligerent or something?" Another manifestation of this level would be where the speaker diagnoses his reactions to the group: "I think I get upset because you can't or won't see the difference between what I want from you and what Charles wants. I'll try once more. He says 'Help me with my problems', and everyone pays attention. I want the kind of attention you give him, but I don't want to say 'Help me with my problems!'"

In the Hill and Hill Interaction Matrix, we thus have available an instrument for analyzing and quantifying a broad spectrum of human behavior, particularly as it relates to groups. The method of scoring used with the Interaction Matrix allows for descriptions of interaction of an entire meeting or any segment of a meeting, the behavior of any specified member, or the effect of any unit of interaction. The authors have applied extensive validating tests to the Matrix and have found it to be a remarkably reliable instrument in the hands of competent persons. As with any medium which rates human behavior the Interaction Matrix presumes skill and insight on the part of its users.

But over and beyond the rather obvious purposes served by the Matrix with regular psychotherapy groups, we should like to suggest that it offers important assistance to those of us functioning on a somewhat less formal level. Knowing the many levels on which humans effect the lives of each other, we can understand better the impact we are having upon the groups with which we might work in a variety of circumstances, and also their effect upon us. Knowing that much that currently passes as "group therapy" may simply be a verbal give and take with few therapeutic implications, we can more accurately gauge the predicted results of such meetings. Further, as we recognize that not all mentally troubled persons are contained within a hospital environment, we can borrow from these basic principles of human interaction and bring increased mental health opportunities to bear upon the children we work with, their parents, and hopefully, ourselves.

In the words of Corsini, "Group psychotherapy evolves from religion, education, and the social sciences. It is therefore old and at the same time new. It is like a river, fed by old streams and penetrating into new territories." Perhaps our role as educators and workers with exceptional children is to help divert these streams to bathe the lives of handicapped children everywhere.

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THE COLLABORATION OF STATE DEPARTMENTS AND UNIVERSITIES IN RESEARCH

Lloyd Smith

As we have heard from our two speakers this afternoon, State Departments of Public Instruction traditionally have had, and continue to have, a most imposing position in the research that goes on in the general area of special education. This is as it should be, for there has grown up a very natural relationship between universities (where most of the research ideas probably originate) and state departments. It is that relationship which now must be studied toward the end of change, or modification, or extension. Our beginning point this afternoon must therefore be an examination of the existing division of responsibility between universities and state departments. What does each do in the education business? How does each help the other?

What we have in front of us today in the way of a problem setting, is not essentially a new area of endeavor, but a problem of working out an adaptation of already existing relationships and procedures to fit a specialized job. If we can adapt what we already know works in tasks being currently undertaken cooperatively by these two service agencies of the public, then there is no reason why research efforts cannot be forthcoming. But there are, as there always are, certain difficulties that must be overcome: it is with these that we are mainly concerned this afternoon.

The Obstacles that will Prevent an Immediate Breakthrough

There are several obstacles that present themselves when one attempts to look at the prospect of a concerted research program arrived at by mutual agreement of state departments and universities. Not the least among these is the seemingly simple matter of arriving at a mutually agreeable definition of "research" in special education. It seems to me that there are two major types of research being carried out in the educational world today. These do not represent a quality differential, necessarily: one is not by definition "high level" research and the other "low level" research. There has been a distinction occasionally made which divides them into two broad categories of institutional research and action research, although those terms do not adequately distinguish them, either. If you have been in the kind of position that I (and probably all other professors in colleges of education) have been, you know the distinction of which I speak. A student comes into the office to discuss a possible thesis or dissertation topic. He (or she) says, "I would like to work out a new program in language instruction for the retarded for my thesis." Going strictly by the brief description given by the student, this is not research as most of our institutions of higher learning view research. There are no data indicated as being gathered. There is no hypothesis to be investigated statistically. There is no apparent design which will allow comparisons of various treatments given to randomly selected or otherwise designated samples. Unless these problems can be worked through the long hours it takes to do such things, there is simply no study in the making.

The case has been overstated naturally. There are modifications of strict research design that are allowable; there are even some studies which have only the minimal consideration of numerical data which can be analyzed objectively. But the implication is nonetheless an important one to keep in mind in thinking about the problem of research in special education; and that implication is that there are some types of information which we need very badly in special education today which we will probably not get through institutional research. In short, schools cannot rely totally upon institutions of higher learning to find out even partial answers to some of the practical problems that they encounter on the real life scene. On the other hand, some of the research which is quite acceptable as institutional research is not the research which can offer to the public school even any tentative guides for practice.

This is exactly the point at which it would seem that a state department of public instruction, through its division of special education, comes into the picture. Because it is not bound by some of the more academic restrictions which confront a person working at a university, and because it has a much greater contact with populations of various types of handicapped children than do the individuals at a university, the state department can help to carry out research projects which have a more immediate application to classrooms and other types of services given by a special education system. What am I talking about? Perhaps if a few principles which could govern collaborative research of the sort that we are interested in were given, the image would be a little clearer.

Types of Research Which Fit the Needs and Resources of Universities and State Departments.

1. Results ought to be useful to local school systems when published. By this is not meant that the results should not be useful to universities as well. Actually, if the research has practical implications, it should be of benefit to instructors of teacher-training classes, should it not? The emphasis, however, should be upon whether or not it gives added information about how to work with exceptional children through the various services that

we try to give them through our public schools.

2. The research ought to be of the type such as may be carried out in a public school setting. Speaking with reference particularly to my own state, we have involved the public schools, who ought to be the ultimate recipients of research, far too little in research in exceptional children to date. Part of this has been because of necessity, but part has also been because we just haven't asked them for their assistance.

3. The university's role ought to be one primarily of acting as a consultant in planning the research and giving assistance in the preparation of the final report. This seems to be a necessary element because of the pressures of time upon university personnel today. The university professor with classes to teach (many of them large classes), with master's degree students and doctoral service obligation within his state, cannot be chasing around the countryside giving first-hand supervision to projects within public schools. He is much better used in that role for which he was prepared: helping groups of people think through the ramifications of their ideas and bring them to a workable definition of action.

4. The state department's role is primarily administrative and supervisory in nature. In this sense, the state department ought to be responsible for securing cooperation from local school districts, handling financial matters pertaining to materials and publication (unless there is a university press available). and seeing that the right thing gets done in the right place at the right time, according to plan.

Needed Areas of Research to be Done by Universities and State Departments

Let me take the last few minutes of the alloted time to sketch just a few areas that could be explored by state departments and interested personnel at our universities.

1. Accurate surveys of the retarded school-age population on a state-wide basis.

2. Status studies of special education personnel. We need, particularly, studies of what they do on the job in comparison with what we think they should be doing. (School psychologists, in particular, ought to be studied with respect to whether or not they are being used most beneficially).

3. Studies of suitable content for educable mentally retarded classes.

4. Studies of materials and methodology.
   A. The function of the basal reading text (vs. experience reading, etc.)

For all of these, universities find it very difficult to carry out such projects because:

1. They are unable to carry out the work over a long enough period of time (assuming that most research at the moment is graduate student research), and because;

2. It is difficult to pull together a large enough pupil sample in a geographic area that can be adequately supervised.

It is not that universities are not interested in these matters; it is that they find it difficult to get into the schools without the assistance of an intermediate agency. It is not that state departments are not interested; it is that they do not often have the trained personnel necessary for detailed planning of research. If such research is as important as I think it is, it is most important that some planning be done and that such planning be followed by some action. I propose that state departments think strongly toward the direction of forming within their Division of Special Education a group on research, a group made up of key personnel from within the Division itself and also representatives from interested institutions within the state. Further, that this group attempt to draw together the research that has been done and to assess the resources that are available for the future. The ivory tower, the administrative office, and the classroom and therapy room are not really as far apart as some would say. This type of cooperative research approach could do much in bringing them even closer together.

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HOW EFFECTIVE ARE LABORATORY EXPERIENCES FOR THE PRACTITIONER IN SPECIAL EDUCATION?

Howard H. Spicker

In our struggle for survival against the forces of Communism, it has become rather precarious to stand too vehemently for a particular cause. However, it still appears safe for educators to be in favor of such unquestioned virtues as "motherhood," "individual differences," and more recently, "research." There are numerous reasons why educators are looking upon research with increasing favor. Since the advent of Sputnik, many of our traditional teacher education practices, including laboratory experiences, have come under severe attack by influential spokesmen both from within and also outside of our profession. In our attempt to answer these charges, we have become aware of the lack of concrete evidence with which to support our practices. Furthermore, we have awakened to the realization that much of what we term research is of questionable quality. A glance at the literature on the effectiveness of laboratory experiences will reveal "research" based largely on opinion, descriptions of practices, recommendations of committees, surveys and related recommendations, and a few critical studies (Michaelis, 1960). Two of these studies have been selected to illustrate avenues related to laboratory experiences in special education which require further research.

Studies utilizing opinionaires, unfortunately, continue to dominate educational research. The opinionaire series of U. S. Office of Education publications based on the study Qualification and Preparation of Exceptional Children are well known to most of us in special education (Mackie & Dunn, 1954). Part of the study deals with the gathering of opinions from specialists in the field as to: 1. the importance of student teaching; 2. the necessity of full-time, regular classroom experience as a prerequisite for specialization; and 3. the amount of time which should be spent in student teaching. The three issues raised are extremely important to us in special education. But the fact remains that the U. S. Office publication, while raising these important questions, does not do much in the way of answering them properly. Valid and significant answers to the first two questions can only be determined from data collected from an empirical study. Opinionaire speculation, even though such opinion and speculation comes from professionals, cannot be considered fact. Since the three issues raised by the study are of such concern to our field, each one will be discussed separately in greater detail.

Student teaching practices differ widely from institution to institution. For example, some institutions require one full-time block of student teaching, while others require several short-time blocks to include opening and closing school experiences. Some student teachers spend most of their time observing, while others begin teaching almost the same day they arrive on the scene. So varied are student teaching practices that we could extend this list indefinitely. Thus, there is an urgent need to study the extent to which varying student teaching practices contribute to later teacher competence. After all since the development of such competence is the major purpose of student teaching, it should be evaluated on that basis.

The question of whether or not one or more years of full-time, regular classroom experience should be a prerequisite for specialization in an area of exceptionality has plagued the special education field for years. Since opinion has always run strongly in favor of such experience, with a possible exception in the area of speech correction, we in the teacher education business are often forced to wait for teachers trained in other disciplines at the undergraduate level to return to us for specialized training at the graduate level. The number of young, capable persons lost to our field when specialization at the undergraduate level is denied must, for the present, remain a matter of mere speculation. Since the full-time regular classroom teaching prerequisite may be hindering recruitment of persons into our field, it appears that a study is warrented which would compare the competencies of special education teachers who have had one or more years of regular classroom teaching experience prior to specialization with those who had only regular classroom student teaching. Only by means of such an empirical study will we ever arrive at a concensus for including or eliminating this requirement.

The question of the amount of time which should be spent in student teaching or clinical practice in a particular area of exceptionality is not only inappropriate to answer by "opinion" but is equally inappropriate for empirical research. As has been stated by the American Association of Colleges for Teacher Education in its "recommended standards governing professional laboratory experiences and student teaching," "Both assignment to and length of time spent in a given situation or type of laboratory experience will vary with individuals. Each contact should be long enough to help the student achieve the purposes for which he entered upon the experience" (Flowers, 1948). Five years later Lindsey (1954) conducted a survey to determine the effects that adoption of the AACTE standards for laboratory experiences had had on the Association's membership institutions. She noted that "Provisions for individual differences of students in student teaching is still limited, the chief provision being through adjustments in the nature of activities." In a questionnaire survey of institutions offering teacher education in Oklahoma, it was reported that flexible student-teaching assignments based upon the needs of individuals were "too difficult to administer" (Williams, et al., 1960). It appears that we in teacher education preach the doctrine of individual differences to our students, but practice it only when it is convenient to do so. Teachers entering the field of special education bring with them widely diversified backgrounds; therefore the type of laboratory experiences and the length of time spent in them should be based on the needs of the individual.

It would appear then that there is a need for some rather full-scale research to study how best to make student teaching more effective. Major studies are also called for to investigate the full-time regular teaching prerequisite and its effects on special education. However, the question of the amount of time each student spends upon student teaching and in other laboratory experiences should depend upon the student's unique background and his own individual previous experiences.

So far we have mentioned only experience prerequisites for specialization and student teaching. However, the American Association of Colleges for Teacher Education defines professional laboratory experiences as "all those contacts with children, youth, and adults which make a direct contribution to an understanding of individuals and their guidance in the teacher learning process (Flowers, 1948). Obviously, then, the term "laboratory experience" is an inclusive one of which student teaching is but a part. Let us look at some of these other laboratory experiences. The most frequently included one is "observation" prior to student teaching. Did you ever ask yourself or your professor who carefully structure such observations and prepare their students for what they are to look for.

Too often, however, the students are told that they are to observe a particular class for so many hours a week, period. A master schedule verifying the observations is kept and by the end of the quarter we are sure of one thing: the students did or did not attend the required number of observation sessions. We are certain that the students all benefited from their observations because "everyone" knows that observation is a "good thing." But is it really? We'll never know unless we become more critical of such old "established" practices as field trips, observations, and student teaching. We need to continually ask ourselves "what evidence do we have that this experience will be worthwhile?"

This requires setting forth specific goals and objectives for the laboratory experience and then testing to determine whether the student attained them. However, we must keep in mind that the overall purpose of laboratory experiences is to help prepare persons to pursue their profession in a competent manner. If the student successfully acquired the knowledge and skills we deemed important and then after graduation turned out to be a poor teacher," we had better stop blaming the teacher and instead take a critical look at what we are calling important knowledge and skills required for "good" teaching. Evaluation of the ingredients which went in to make up the product, however, is difficult when the product is never evaluated.

Until now we have concerned ourselves with the effects of laboratory experiences on the teaching competencies of the practitioner in special education. Let us turn now to a different function of laboratory experiences -- changing teacher attitudes toward exceptional children. Attitudes toward exceptional children vary greatly. Some persons are repelled by the sight of a cerebral palsied youngster; some see no value in educating "dumbbells"; still others feel great pity toward children with such visible handicaps as blindness and see them as totally dependent individuals requiring charity for life. Attitudes such as those mentioned are sometimes more handicapping to an exceptional child than the handicap itself.

It is quite logical then that we should concern ourselves with ways of changing inappropriate attitudes of regular and special educators toward exceptional children.

A study designed to effect changes in attitudes of regular classroom teachers and administrators toward better acceptance of exceptional children was reported by Haring (1956). Identical workshops were held for all teachers and administrators of four public schools, two hours every other week for approximately 30 weeks. The first hour included lectures supplemented by visual aids in an area of exceptionality; the second hour was set aside for small discussion groups led by discussion leaders. Analysis of data from the pre and post tests designed to assess changes in understanding and acceptance of exceptional children yielded the following results. All groups significantly increased their understanding of exceptional children; however, significant modifications of attitudes in a positive direction occurred only in the groups belonging to the two schools in which there were a great number of exceptional children in the classrooms. The major implication of this study appears to be that increased knowledge will not, by itself, modify attitudes of individuals toward exceptional children. Evidently such knowledge coupled with some form of experience with exceptional children is required for attitudinal changes to occur. However, the question still remains -- does the change in attitude depend on the kind of experience to which the individual is exposed, or are all experiences equally effective. For example, what part, if any, does observation play in effecting desired attitudinal changes? To be even more specific, is observation in which the individual is given general exposure to exceptional children effective in modifying inappropriate attitudes or is it necessary to carefully structure and direct the observation? With questions such as these remaining unanswered it can readily be seen that the Haring study is only a first step in our knowledge concerning modification of teacher attitudes toward exceptional children. A generalization that any direct experience with exceptional children will successfully modify undesirable attitudes toward them is certainly premature until all the pieces to this puzzle are collected and assembled.

This paper has probably done little to inform you of the effectiveness of laboratory experiences for the practitioner in special education. However, I hope it has helped to make you more critical of practices which can be justified merely on the basis of tradition. Perhaps what was "good enough for grandpa" is no longer good enough for us.

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LEARNING AND MOTIVATION: RESEARCH WITH THE MENTALLY RETARDED

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The literature is replete with findings indicating that, in general, mental retardates tend to learn more slowly and less efficiently than intellectually normal individuals. There are studies which suggest, furthermore, that even when subjects from these groups are matched according to MA, or some other score representing level of intelligence, normals tend to do better in certain respects.

This relative deficiency in learning ability is, to a certain extent, probably related to what might be referred to as the "physiological limits" of the retarded subject population, and represents a major aspect of the very definition of mental retardation. It is suspected, however, that there are certain other factors contributing to the differences between the groups, which may be influenced by environmental variables. An attempt will be made in this paper to conceptualize some of these factors within a learning theory framework.

Let us consider the Hullian notion of general drive level, or motivational level. Within this framework, general drive level derives from, or is contributed to by, all sources of drive. Drive, here, is said to activate all habits indiscriminately; that is, a condition of high drive tends to increase the probability of the individual's making any of the possible responses in a given situation. This effect is described as being multiplicative in nature, however, the outcome being that the stronger the habit or response-tendency in the situation, the greater will be the increase in the probability associated with the occurrence of that particular response as drive level increases.

The work of Taylor and Spence (1951, 1956), and that of Castaneda, Palermo, and McCandless (1956), and others, suggested that learning was facilitated by heightened drive when the individual was attempting to learn a simple task, whereas a condition of heightened drive tended to interfere with, or hamper, the learning of a complex task. The following explanation of these findings was offered. A simple task, by definition, is one in which the correct response is clearly dominant; that is, the probability associated with its occurrence in the situation is much higher than that associated with the respective occurrences of any of the other possible responses. Increased drive, affecting response probability multiplicatively, further increased the probability that the individual would make the correct response in the situation, thereby facilitating the learning of the task. In the complex task, on the other hand, the correct response was not as clear-cut; not as distinguishable from an array of possible responses. Increased drive level in this situation served to increase the respective probabilities of occurrence of a number of responses, both correct and incorrect, and the learning of the correct response in the task was thereby hampered.

What are some of the factors which affect the general level of drive in an individual? Anxiety, whether generalized or situational, frustration, and various physiological states of need are thought to be important drive sources. There is some literature suggesting that individuals in simple conflict situations, in which they are required to make difficult discriminations, tend to manifest increases in drive level (Finger, 1941; Castaneda and Worell, 1961; Steigman, 1961). Another source of motivational increment, which may be peculiar to institutionalized children, is the interaction with adults (Zigler, Hodgden, and Stevenson, 1958).

Of what special significance is all of this for learning in mental retardates? It is proposed here that some of the differences in rate and efficiency of learning that are seen in comparing mentally retarded subjects with intellectually normal ones are in part a function of the tendency for mental retardates to be affected to an inordinate degree by the above-discussed phenomenon. That is, in a given learning situation the mental retardate will have a greater tendency to behave in the manner of an individual trying to learn a complex task under conditions of heightened drive.

It is necessary at this point to take the liberty of making the following general assumptions about mentally retarded individuals:

1. Mental retardates experience failure and frustration more frequently than do normals.

2. One effect of this is that they experience anxiety in a greater array of learning situations than do normals.

3. Mental retardates have more difficulty in making discriminations than do normals, and therefore tend to find more situations to be ambiguous and conflictful.

The above assumptions imply a heightened level of drive in a variety of situations.

4. A mentally retarded individual will tend to experience more tasks as complex than will an intellectually normal individual. That is, the simplicity or complexity of a given task is relative to the intelligence of the individual learning the task.

The anticipated effect of all of this is that the factors of heightened drive level and high task complexity should interact to hamper learning by the mental retardate over and above the deficit related to the latter factor alone.

Steigman and Stevenson (1960) found that normal preschoolers had more difficulty learning a discrimination task after a failure experience than they did following a situation in which they experienced success. The interpretation of this finding was that the anxiety and frustration associated with the failure experience contributed to the subjects' general drive level and interfered with the learning of the subsequently administered complex discrimination task. The study was replicated with retarded children of comparable MA (Kass and Stevenson, 1961), who also performed less well following failure. The difference in performing under the two conditions was not as great for the retarded subjects, whose performance under the success condition was inferior to that of the normal subjects. Since both the normal and retarded control (no antecedent task) groups performed at the same level as the respective failure groups, and, since anxious behavior was observed under both these conditions, the interpretation was advanced that both the novel and the post-failure presentations of the discrimination task involved anxiety, whereas the administration of the success condition tended to be anxiety-reducing. It was hypothesized further that the retarded subjects continued to experience some degree of anxiety even under the post-success condition, and this interfered with their learning of the task. This explanation appears reasonable, although the question remains as to whether the task was perceived as being more complex by the retarded subjects than was the case for the normal subjects.

Lipman and Griffith (1960) found that high-anxious (according to the Children's Manifest Anxiety Scale) retarded subjects had more difficulty in learning the 'complex' items in a concept formation task than did low-anxious retarded subjects. They did not find, however, that high anxiety facilitated performance in items where the correct response was dominant (simple task), and felt that this contradicted the drive hypothesis. One possibility that was overlooked, however, was that this task which the authors had defined as "simple", may in fact have been relatively complex for the mentally retarded subjects.

The tendency for mentally retarded individuals to manifest perseverative behavior may, in certain instances, be explained in relation to the above hypothesis. Perseveration may be conceived of as the repeated elicitation of the dominant response in a situation, whether correct or incorrect, under conditions of heightened drive. Normal preschool children were found (Steigman and Stevenson, 1960) to manifest significantly more perseverative behavior following a failure experience than they did following a successful situation.

In summary, the hypothesis is advanced that part of the learning difficulty demonstrated by mentally retarded subjects, when compared with normal subjects, is related to the following: Mental retardates generally tend to experience a greater array of drive-inducing antecedents, and tend to experience tasks as being more complex than is generally the case for individuals of more normal intelligence, the outcome being that, in a given learning situation, a mental retardate has a greater tendency to behave in the manner of an individual attempting to learn a complex task under conditions of heightened drive. Such a situation has been found experimentally to be nonfacilitative with respect to learning in normal subjects.

While little can probably be done to eliminate those aspects of the learning deficiency that are "inherent" in mental retardation, some of the above-discussed factors can frequently be controlled experimentally, and could probably be controlled in a practical situation. In several respects, the developing approach with "programmed" learning techniques appears to be oriented in this direction. The problem of task complexity is attacked by breaking the learning task into simple steps, and by rendering the correct responses dominant through the use of frequent repetition and a large number of supportive cues. This has the effect, in addition to that of simplifying the task, of reducing the difficult discrimination, or conflict, aspects of the learning situation. Another feature of the programmed approach is an attempt to provide a situation involving errorless performance, at least during the early steps in each program. The anticipated effects of this upon the motivational aspects of the learning situation should be obvious.

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PERCEPTUAL PROCESSES OF THE MENTALLY RETARDED: A REVIEW

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In his 1958 review for MENTAL SUBNORMALITY Seymour Sarason comments:

> "The diagnostic process for the mentally ill person is a searching comprehensive investigation which has the understandably ambitious aim of attaining understanding of another person's "psychology" -- that individual's way of thinking, feeling, and acting. Rarely, if ever, is the mentally defective individual studied or viewed in this way." (p. 313)

After searching for studies with a much less ambitious aim -- namely, that of understanding how the mental defective perceives his world -- the writer must agree that the "psychology" of the mental defective is not a popular topic. Seldom does it exert the compelling interest of, say, the perceptual world of the schizophrenic. In psychological research, at least, the defective is usually pursued by someone out to prove a point about something else: hereditary transmission of traits, cortical conductivity, or normal child development, to name a few topics. The defective frequently enters in as a member of a second control group. In this role we learn simply that he is more so or less so than another subject whose performance was more interesting.

Nevertheless, there are a small number of studies which tell us something, directly or indirectly, about the defective's perceptual processes. One can identify three main bodies of experimental work. Each one of them is tightly organized around one or two dominant contributors: The first, Alfred Binet; the second, Werner and Strauss; the third, Jean Piaget. Theoretically, the three are only loosely connected to one another, but it is possible to pick out a few common ideas.

The three bodies of work are widely spaced in time. The writer will review them in chronological order.

Alfred Binet

The comments to follow are based entirely on Binet's 1916 book, *The Intelligence of the Feeble-Minded,* (1) on the assumption that this book sums up his major contributions to the topic. In it he reports observations and test results on a small number of adult, institutionalized defectives. The studies to be reviewed later used children as subjects, so it is important to keep this difference in mind.

Before speaking of those functions traditionally labelled "perceptual", the writer would like to report Binet's more general statements about the behavior of mental defectives. Any statements about perceptual processes can then be evaluated in context.

The idiot-imbecile-moron terminology was already in use, and Binet so classifies his subjects. He defines each level by a few simple behavioral tests, familiar to us all as precursors to the modern Binet scale items. His general approach was to examine each subject thoroughly on a variety of functions.

Binet states that these qualities differentiate the normal from the subnormal; first, a *lack of inhibition*. Like children, the defective show a striking absence of concealment. They seem to say whatever comes into their heads. They scratch where it itches, when it itches. Second, a *defect of attention.* Binet even constructs a crude scale of attention and asserts that it can serve as a rough scale of mental development. Grade 1: Can one gain S's attention and fix it upon a particular point? Grade 2: Once fixed, can this attention be held for a time? Grade 3: If distracted, can S. return to the original point of fixation spontaneously? Grade 4: Can S. even resist the cause of distraction? Binet cites an idiot who can make Grade 1 and also Grade 2, if one stands sufficiently close to him and gives orders with "an imperious voice and emphatic gestures." His imbeciles pass Grades 1 and 2 easily, but falter on Grade 3.

Third, he says, "defectives are *incapable of voluntary effort* in every domain." Through tests of reaction time, quickness of movement, immediate repetition of numbers, and producing the maximum number of word associations, Binet observes their constant need for encouragement, their lack of pleasure in success, and how very painful the effort seems to be for them in spite of their obvious desire to please. As usual, he formulates a quantitative relationship: the lower the intellectual level, the weaker and less sustained is the voluntary effort.

Coming to perception per se, Binet collects data on judging weights and the relative length of lines. He concludes that if one could separate out the effects of inattention and position habits, one would have to assert that *defectives possess nearly as good an appreciation for fine sensory differences* as do normals. They seem to have a positive advantage in any task demanding an immediate impression, a quick judgment. Normals are simply confused by their tendency to reflect on their immediate impressions. Defectives are *unable* to reflect, and so they respond more accurately, provided the discrimination task is simple enough.

Binet also mentions what he considers a related phenomenon, showing the same adequacy of primitive discriminations even when more complex ones are absent. He would place, say, 4 beans on a table and ask his subject to look at them carefully. Then he would scoop them up in his palm and, on the next trial, place 5 beans in the same place. He would then ask: "Are there any more beans than before?" By this method he established that many defectives could discriminate more from less accurately and consistently. One imbecile could retain an image of up to 7 objects. Yet the same subjects would fail to count properly. In fact, the absence of the need to verify their responses by counting or any other method was striking.

In the course of this experiment as well as many others, Binet was always impressed with the air of assurance with which defectives responded to questioning. The question of whether they were right or wrong seemed irrelevant to them. Especially when a verbal reply was expected, their responses were often random and nonsensical. Binet realized that the purpose of replying was not to give relevant information -- a task often beyond them -- but simply to accommodate the questioner and avoid his aversive pressure to perform. Piaget later described the same attitude in normal children and how it affected their replies when they were being closely questioned about relationships which were somewhat beyond them.

To conclude his study of mental deficiency, Binet proposed a "Scheme of Thought," in which he identified 3 distinct elements: A direction, an adaptation, and a self-criticism. In all areas he found defectives lacking. A directing idea, if formed at all, is quickly lost; adaptation, requiring effort and choice, is too taxing for them; and self-criticism is completely absent.

Binet's treatment of the psychological aspects of mental deficiency sounds startlingly modern. Few of us would find much in it to quarrel with, nearly 50 years later.

Werner and Strauss

The large body of research initiated by this physician--social scientist team in the late 30's and continuing to the present is no doubt well known to any group interested in the exceptional child. M. D. Vernon (13) succintly stated the problem area treated by Werner and Strauss. His statement may be paraphrased as follows: The major task of the growing organism is to keep his relationship with the world stable and balanced. To do this he must deal with sensory variability and learn to differentiate (1) those changes which are unimportant and can be ignored; e. g. the changing size of the retinal image of an advancing and receding object; (2) those changes which are habitual, recognizable, and easily predictable; e. g. preparing for supper; and (3) those changes which are wholly unforeseen and therefore must be examined in order that they may be related to those changes already known; in other words, so one can get to know their "meaning."

The central thesis advanced by Werner, Strauss, and colleagues is that the brain-injured child cannot sort out perceptual changes, order them, and relate them to his own adaptation as well as the non-injured defective or the normal child. In the performance of tasks requiring him to deal with perceptual changes, he reveals typical failures. His failures confirm on the psychological level the diagnosis first made on the basis of neurological evidence. It is to the exploration of psychological differences between the brain-injured and the non-brain-injured, and to their educational implications, that the authors commit themselves.

For their experimental studies (5, 6, 7, 8, 9, 10) Werner and Strauss chose usually two groups of 20 children each, one group with well-established neurological findings, the injured; and one group of "familials", with no trace of neurological findings. The groups were matched for MA, CA, and IQ. They were older children, 8 to 14 years, and represented the higher grades of mental defect, IQ's 60 to 90. Occasionally they added a group of normal children, matched for MA. Because the experimental groups were composed in this fashion, the results tell us something of the non-injured defective even though the authors were primarily interested in processes unique to the injured.

The findings may be summed up as follows: Brain-injured children perform less adequately than other children when the important stimulus is *complex*; that is, patterned; and this disability obtains through all modalities tested: visual, auditory, tactual. When asked to draw, name, or point out visual forms presented on a background which also had form, the Ss found it difficult to pick out the more articulate form. They also found it difficult to respond to the two patterned stimuli one at a time. The figure-ground relationship, primitive though it is, is still not a *given* in sensory experience. The subject must create it. Brain-injured children have difficulty creating this organization in their perceptual fields; and if they do succeed, the organization is weak and vulnerable to interference from contiguous stimuli. Not only did fewer of the brain-injured children succeed in reproducing or discriminating the many complex stimuli with which Werner and Strauss confronted them; they also worked more slowly and cautiously, as though they had learned not to trust their sensory impressions. Their defects were apparents both in the creation and the analysis of patterns.

Brain-injured children also *perseverate* more often. Perseveration is a familiar phenomenon in both pathological and normal states, but Werner and Strauss argued that their injured subjects displaced a peculiar form of it. In one study they not only gave a higher total number of perseverative responses, but they also stuck with their repetitions through a longer sequence of trials and were more likely to return to their first successful response after having abandoned it earlier. The perseverations of non-injured subjects more often followed immediately the first successful response and occurred only once. The experimental task required recognition of visual forms. Is the achievement of form-quality such a relief to the brain-injured child that he finds it hard to give up a successful response, once organized? We know from normal child development that skills on the brink of mastery are practised endlessly and with great enthusiasm. It may be that, in perceptual tasks, the brain-injured child hovers on the brink much longer, which would account for his compulsion to "go back".

Strauss and Werner also examined their subjects for their ability to perceive apparent motion and flicker fusion. Just as the children have difficulty "filling in the gaps" of a visual form made up of discrete elements (e.g., dotted line drawings), they also require a shorter time interval between successive presentation of stimuli in order to see motion where none exists. *Most failed to see it altogether*, and some saw it only on one figure and not the other. In other words, they failed to integrate the two stimuli into the impression of one stimulus in motion, as the normals did. When the subjects were tested for the perception of real motion, differences between the two groups diminished. Apparently contradictory results emerged from the tests of critical flicker frequency. Brain-injured subjects saw this common illusion more easily than normals. To encompass these data, the authors were forced to stretch their neurological theory a bit: they had to assert that brain lesions, which supposedly result in the relative isolation of certain areas, will not only produce a failure to integrate discrete stimuli, as in the case of apparent motion; they will also, in the case of CFF, produce "prolonged after-effects of stimulation," thereby making it *easier* to fuse discrete stimuli.

Another line of evidence for perceptual instability comes from their studies on the reasoning of Ss when asked to sort objects into categories, match objects with pictures, and classify objects as living or not-living. The responses of brain-injured Ss showed a personalization which the authors say cannot be explained on the grounds of general immaturity. For example, they more freqently classify objects as "living" on the basis of human characteristics projected into them, or on the basis of their usefulness to humans. A similar dependence on "use" was not found in vocabulary tests, where it would be a sign of general immaturity. In normal development, or the development of a non-injured defective, the decline in "animistic" thinking, meaning a failure to distinguish the living from the not living, is associated with a corresponding decline in "egocentrism" meaning that the child stops projecting his own point of view indiscriminately. Werner and Carrison (7) think these processes are retarded in the brain-injured child because "in . . . an organism greatly steered by outside stimulation, the essential difference between oneself as a person, who masters the external world by planful action, and objects must necessarily be less felt." (p. 60). The vague impression of the difference between the self-initiated and the inert which serves as the starting point for a concept of living vs. not-living would naturally be blurred for an organism who is himself less able to initiate, and, by the same token, to stop, independent activity.

Dramatic examples of the highly personal, "runaway" chains of reasoning unique to the brain-injured child come out when subjects match objects with stimulus pictures. A normal or non-injured defective will approach the matching task as a "sober, logical problem." He will, for example, place a boat or a lifesaver in front of a picture of a drowning boy with the comment: "That's to save the boy". The brain-injured subject, by contrast, frequently responds to the picture as if it were real; and the picture sets off for him a chain of responses which expand the situation in time and space. In addition to, or instead of, the common objects relevant to the picture, he may add a ball "because he had that in his pocket before he went into the water" or a table and chairs "because he'll have to eat when he gets out." He will also be more likely to include human figures and to place them carefully facing the picture. He will more often go off on a tangent suggested by one of the objects: and in the process of elaborating his sub-theme, he will forget the main task. These unusual responses were confined to the damaged. They also gave a greater total number of responses, but the unusual responses were just as often early choices as late choices. They did not result from pressure to perform. Normal children also gave more responses and a wider variety of responses to the same test, but the very literal, personal time-space expanding qualities were absent. Strauss and Werner also remark on the injured child's perference for objects which invited a motor response because of their moving parts.

To sum up: Implicit in all these phenomena is a failure of inhibition. The brain-injured child fails to inhibit the impact of stimuli irrelevant to the task. Werner and Strauss would prefer to say that brain lesions somehow interfere with the normal mechanisms of integration of raw data coming from the sense organs. The power to inhibit would be one of those mechanisms. They have shown that there is poor integration of space and time events and there is difficulty in creating and sustaining the figure-ground distinction. The brain-injured child finds it very hard to reject and choose, to ignore and emphasize, to stop and start. He pays a higher price in time and effort for the organization he achieves, and his organization is too easily threatened by the arrival of new input. Vulnerable as he is to every new stimulus, he must learn to avoid receiving new stimuli if he is to sustain his attention to the task. In his efforts to adapt in spite of his handicaps, he developes the secondary characteristics of "rigidity" and "perseveration".

What we learn about the non-injured defectives through these studies is that their form perception is vaguer than that of the normal, but retains its coherence; that they produce fewer responses and more often dwell on the static properties of objects; that their thinking is more conventional; and they more promptly relinquish a perseverative response. The defects of attention among the higher level retardates studied by Werner and Strauss were not particularly noticeable.

The work of Strauss, Werner and their colleagues impressively meets the criterion of internal consistency. Whether or not it meets the criterion of replication, the writer cannot say, since she is not aware of any exact replications. Their speculations about brain-function, following Goldstein, never were taken seriously in some quarters; still less today. But clinicians, educators, and parents have made wide use of their work to reduce their own figure-ground confusions when confronted with that maze of apparent contradiction, the brain-injured child.

Piaget

The third, and comparatively recent, body of experimental work may seem rather remotely connected with what has gone before, but I would like to mention it briefly. It is not well known in this country. The most important contribution is not yet available in English, to my knowledge, and that is Inhelder's *The Diagnosis of Reasoning Among Morons*, 1944 (3). Her work, and the work of Woodward in England, (11, 12) applies Piaget's theory about the development of logical thinking to the behavior of mental defectives. What has this to do with perception?

The philosopher Cassirer states that there are two principles necessary both for the building of the perceptual world and the building of a logical system: The concept of *group* and the concept of *invariance*. "Wherever there is an opposition and separation between object and subject, perception is something altogether different from mere reflection of the 'external' by the 'internal'. Perception is not a process of reflection or reproduction at all. It is a process of objectification, the characteristic nature and tendency of which finds expression in the formation of invariants. It is within this process that the distinction between 'reality' and 'appearance' emerges" (2, p.20). Perception and logical thought share the common function of attaining objective knowledge for the organism; that is, knowledge that shall be free of -- not at the mercy of -- fluctuating appearances. Attainment of the perceptual constancies brings their possessor knowledge of a *stable* outside world and thereby furnishes the information he needs to act confidently upon that world. He is able to predict its objective characteristics in spite of constantly shifting appearances.

Piaget (4) consistently stresses the significance of the constancy processes in the evolution of intelligence. The terms, constancy, conservation (which is a kind of constancy), group, and operation crop up frequently in his treatment of the subject. Unless a child attains the perceptual constancies, he is unable to take the next step in intellectual growth, for the next step involves the coordination of *groups* of perceptual constancies and the abstraction from them of a rule, a definition, an invariant, as Cassirer would say. From the point of view of perception, *intellectual growth is marked by successive stages during which one becomes more and more free from the appearances of things in formulating one's thoughts and actions.* It should therefore follow that defectives, as cases of arrested mental growth, are like young children in their greater dependence on shifting perceptual cues.

Both Inhelder and Woodward have demonstrated that defectives do, in fact, behave much like young children in experiments on the conservations of number and the conservation of volume. In these studies certain operations are performed before the child with the deliberate purpose of creating misleading appearances. For example, two groups of six objects each will be placed before the child, identical in all respects except that one group of objects is scattered over a much larger area. Below a certain level of mental growth, subjects will be led to assert that the bigger area contains more objects. They will be unable to use the operation of counting to unite these perceptually different groups into one, and thereby assert their identity. Similarly, when a glass of water is poured into two smaller glasses, they may assert that there is now more water "because there are two glasses" or less water "because the glasses are smaller". To be so at the mercy of appearances is typical of the 4 to 7 year old normal child, and defective subjects giving such responses usually have mental ages within this range.

The writer adds this quick glimpse into the work of Inhelder and Woodward for two reasons. One, to emphasize the connection between the growth of constancy processes and the growth of intelligence in general; and two, because she feels sure that Piaget's notions will add new depth and precision to future studies on the perceptual processes of the mentally defective.

Summary

This review may seem to have wandered far afield. To study perception is to study many other things as well, especially cognitive processes. Perception and reasoning are linked so closely that it is almost impossible to suppress comments about one while speaking of the other. Perception is an evaluative, organizing process from the beginning.

Lack of inhibition is the most frequent experimental finding. The inability to ignore some kind of irrelevant stimuli is part of every failure exhibited by the mentally defective. The mere act of attending requires an effort of inhibition, and one must attend before one can perceive. But assuming that the defective can attend to the task under discussion (and everyone from Binet on down has remarked on his frequent failures to do so), most investigators agree that the perceptual processes of the defective are no different from those of the normal person of his mental age. In some cases they are no different from those of a normal person of the same chronological age. The apparent exception to this rule is the defective individual who has sustained a brain lesion. His special inadequacies in the face of figure-ground relationships and the integration of events separated in space and time are still a mystery. There are forms of mental deficiency which do not display these special defects, at least, not to the same degree. Could they be the product of less obvious failures of attention than Binet described? As long as we remain in ignorance of the neurophysiology of attention and inhibition, Strauss and Werner's results on critical flicker frequency and the perception of apparent motion will be hard to interpret.

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REHABILITATION AND SPECIAL EDUCATION RESEARCH IN GERMANY

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The visitor to the United States, impressed by an immense amount of research, has to admit that the comparable activity in Germany is very limited. The development of special education as a science has not generally been favored there. So it has gone a different way from that in the United States. But exchange between systems with different developmental background often proves useful. This may be one of the few encouraging considerations for my topic.

Everywhere special education grows out of emotional striving. People feel that something has to be done. This striving may become rationalized philosophically in the statement that the exceptional child needs special help and therefore has to be given such help.

How can the broader question implicit in rehabilitation, including psychological and social variables, be followed? One way is to elaborate out of the observation a theoretical formulation which is designed to explain the observed phenomenon. Another possibility is to test the first observations in a planned experimental second observation. This way is being followed in the United States where within the last 10 or 15 years an immense amount of research has been conducted. A third way remains: one can be led by observation to general formulations and can then test these formulations in experimentally planned observations. In Germany research in special education has not developed systematically until very recently. For a long time it was felt that observation as provided by everyday experience would be a sufficient source out of which the teacher in institutions could improve his understanding. Whereas the medical science made fast progress within the first half of the century, special education was not regarded to be a scientific discipline at all. Only within the last years some universities, mainly the one of Hamburg, have concerned themselves with special educational problems and some groups of exceptional children are studied in experiments such as one which is measuring the differences of the interpretation of mimic expression of mentally retarded and normal children. However, for years without any help from the universities, considerable contribution has been made by special educators in improved teaching techniques in school and occupational training for the different groups of handicapped youngsters.

Research had to grow out of personal interests and unsatisfied questions rather than out of public interest and public funds. In exemplifying its development I shall concentrate on the orthopedically handicapped children. First, research was concerned with the incidence. The most extensive study counted and classified in an enormous effort with the help of schools and the State Census Office all of the orthopedically handicapped children in Prussia, providing a statistic of incidence with an accuracy never again obtained. (Biesalsky) It found a total incidence of less than one-half percent which meant a considerable number in total. The Oskar Heleneheim School, a residential school with a clinic in Berlin, has been built backed by this proof of need.

Out of the existing institutions has grown some other research in forms of systematical work of statistical information as to types of handicap served and the kinds of treatment given as well as follow-up studies. These statistics, compiled over some decades, are useful in specifying the needs for improvement of service -- as, for instance, the statistic on age of school entry of institutionalized children which shows that as yet a considerable number of those children (76 to 79 percent of the students of Josef Gesellschaft) start school too late -- proving that sound academic and occupational training may result in satisfying job placement.

The next group of research I would like to mention was conducted in the form of experimental special educational settings, especially planned treatment centers based upon some theoretical hypotheses. I shall give some examples later for this type of research.

The clear-cut experiment itself can be found finally, although in a much smaller number than here in the United States. One of the first experiments of this kind was undertaken in the 30's by H. Winkler (1931), a physician. It is typical of the way in which much of the German research came into being. Winkler became interested in the crippled children's reaction toward their handicap. He felt that their own position toward the handicap was widely influenced by an inadequate public attitude toward them. So, he set up an experiment in design much like those used by Cruickshank, et al. (1958) and Richardson, et al. (1961). Winkler projected pictures of physically handicapped children (post-polio and scoliosis cases) photographed while walking and asked an audience of different lay people to evaluate these children. He compared their statements with the evaluation of each child by the teacher and found that generally the handicapped children were evaluated more negatively by the lay people than the non-handicapped control group and that these negative evaluations were not confirmed by the teachers' evaluations. So this study, although working with simple not analytic statistical means, came to the conclusions identical with those secured later with a more perfect design and therefore better generalization.

Special educators looked for positive compensation for the frustrations set by the handicaps and it is like the German people to expect such compensation for one's occupational skill and devotion. This philosophy underlies a recent study sponsored by the secretary of labor of the German government which attempted to prove the high correlation of satisfactory job placement and emotional and social adjustment by compiling literature and carrying out a field study using much illustrative case material. It gives some insight into the needs the handicapped expects will be met by his occupation, it proves that even severely handicapped people can be placed satisfactorily, but unfortunately it fails to answer the reverse question: how much and under what conditions might emotional disturbances inhibit an adequate job placement and how could such disturbances be remediated? In other words, this study doesn't look closely enough into the unsuccessful cases. I have already mentioned other research centered around the social rehabilitational concept. Much of this research remained at the stage of specialized experience rather than reaching the point from which generalization would be made. Briefs, for instance, reported on a highly negative attitude of parents whose children were in institutions but it could not be shown whether this negative attitude was confined to parents who were likely to place their children in an institution or whether it could be expected more generally.

Within the social concept of rehabilitation, institutional setups have been conducted. In Switzerland agencies had to face the difficulty of placing handicapped people who had never had a sufficient rehabilitational training. These people were treated in hospitals but little interest was given to their rehabilitation afterwards. For that reason, most of them went home believing that they could not gain the independence necessary for occupational placement. In an encouraging attempt a team of specialists in the field of rehabilitational medicine, psychiatry, psychology and occupational education worked together and tried to train these handicapped people in the physical area and at the same time to reduce their emotional restrictions. The attempt seemed to be highly successful. Although no statistics have been published it has been reported that most of the people, among whom were severely handicapped and long-time unemployed persons, could be placed after that short training period of some weeks. Nevertheless, the program was not continued probably because some hospitals had enlarged their facilities meanwhile so that they could meet the necessity of giving rehabilitational training after the medical treatment period. The trial is interesting in that it shows that even within a limited period combined activities can be successful, if followed by the necessary outpatient care.

In Munich an experiment was set up with a special regard to Winkler's study (Strasser, 1954). It was hypothesized that (1) the negative attitude of the normal non-handicapped environment would have a great impact upon the development of the disabled children; furthermore, (2) that all children were probably influenced at one time or another by such an attitude and (3) that it seems advisable to counteract it through a special social remedial setting. Since these attitudes were likely to be incorporated into a number of life experiences it seemed to be of remedial value that the children should be placed in a social environment in which they could gain life experiences which would resolve the results of negative experiences. These considerations lead to a setting in which about 80% non-handicapped young people lived together with 20% orthopedically handicapped. It was expected that in living together with the handicapped, the able-bodied mates would overcome their negative attitude as soon as they learned to see the real person and not the handicap and in addition, the handicapped could experience living together with able-bodied in an equal position. The institution opened in 1948. It was designed for 100 boys 14 to 18 years of age who received their occupational training outside of the institution in workshops. First, the able-bodied were admitted. They were told that a group of orthopedically handicapped youngsters would be expected but that they would not need any special help, but would be able to get around pretty well and that probably very soon they would participate in all the main activities. They were also warned that there was no reason for a pitying attitude. Following the admission of the handicapped boys (diagnosis varied from mild post-polio to amputation to tetraplegia), attention was given to organizing main activities in such a way that these boys could participate. Whereas, for instance, they could not participate actively in competitive football plays, they could participate in training periods or could serve as photographers or coaches. Frequently they were elected to the different offices of the student administration and after a while some kind of friendship developed between single able-bodied and single handicapped boys. From the beginning the danger that the handicapped would build a subgroup was counteracted by placing them into different groups so that each of them had a large majority of non-handicapped boys. Any build-up of a subculture of the handicapped was avoided and it was never noted that the handicapped had any activity for their own or even took a hike without their able-bodied friends. As a result, the experiment showed that this special setting was of high remedical value to those boys who did not suffer from a higher degree of emotional disturbance. Unfortunately, the institution was quite insufficiently staffed. There were sometimes only two people working in the educational field, and some janitors and kitchen personnel. So the possibilities for individual or group treatment were very limited. Nevertheless, it was felt that given a sufficient staff the needs of the emotionally disturbed group within the handicapped could have been met.

After the naive "help is needed" stage and the first systematic approach reflecting social conditioning, this question introduces the third step which is concerned with the immediate response of the handicapped person toward his own physical deviation. In most countries there have been studies which searched for psychic alterations correlating with the handicapping conditions. I would not tend to regard them as being within this third stage of questioning. They rather belong to the naive level for they primarily suppose that a handicap would be followed by some specific psychic deviation. But specific deviations can only be expected within the experience. The reaction will vary with additional life experiences and reactional modes of the different handicapped people. Psychologically, then, it can be asked whether similar life experiences within the handicapped group would enforce similar reactional processes which might produce quite different results.

The study of Richardson, et al (1961) shows that the handicapped person himself participates in the general attitude toward the handicap and it must be asked how this participation reflects his self concept. Prediction can be made in terms of psychoanalytic or Adlerian theory hypothesizing either a superego conflict because of the inability to meet the superego value of healthiness and full performance, or the arousal of hypercompensating mechanisms. Before applying one of these theories it seems advisable to study the changes in the self-concept of the handicapped person. This has been done widely in the United States. In Germany, it was not until very recently that the question gained more attention. Two studies are centering around the concept of the body image which is used here as a term summarizing the more or less conscious perceptual and evaluative elements within a person towards himself. I will report on them very briefly. In both studies children suffering from post-polio paralysis were asked to form a human figure out of plasticine. Whereas the first study of H. Lange-Cosack and R. Mattheis (1956) in which no control group was used reported some deviation such as multiplying the paralyzed member, dismissing a part of it, or making it thinner in shape; no statistically significant deviation could be found in the second study of H. Harbauer, et al (1961) in which a control group of children of the same age was used. Significant differences were gained only in that TAT and CAT performances and in the Szeno-test, but these differences did not reflect a deviation in the body image but rather a difference in life experiences and hence, differential expectations toward the human environment. This study, then, confirmed the impact of the social stigma and proved that emotional and social deviations may exist even without deviance in behavior, but did not add any knowledge about the body image problem.

Two facts may be named for such lack of immediate results. First, it is known that any distortion of the body image seems to be extremely threatening to the subject, and secondly, it is therefore not very likely that such a distortion will show up immediately if the child is asked to draw or form a human figure with whom he will actually identify more or less consciously. This has been confirmed by the study conducted by S. R. Bach (1961) a neurologist, who for the last 8 years examined drawings of children with a severe neurologic condition in the Kantonsspital at Zurich, Switzerland. She proved that these conditions sometimes were reflected very precisely in the drawings of the children if the child is not given a certain topic but is just asked to draw whatever he has in mind. She seldom found the indicated signs in a human figure. Most of the time they were reflected in an animal or in a house or in a landscape. Color, position, and direction seemed to prove indicative. She found that a certain type of red was predominately used by patients with malignant tumors indicating the position of the tumor either in the head of an animal or in the roof of a house or seldom in the hand of a human figure by putting a red dot on the specific space. Dr. Bach, together with their collaborators, drew a blind diagnosis out of the pictures of the child and compared this diagnosis with the clinical reports. She states a high positive correlation. As an example, I will include one of the drawing she gathered and give her interpretation.

This research has implications for the study of the body image. First, it leads to a reconsideration of the general body image concept. It seems as if the body image concept explored by Dr. Bach is different from the way in which this term is usually referred to. Each obviously discovered a much deeper and completely unconscious psychic reflection of an abnormal body condition. This is enhanced by the fact that Bach found indication for the life span which remained for some of the children. It would be interesting to note whether similar unconscious reflections can be found in the absence of such immediate and severe physical danger. Although life tends to isolate those elements incompatible to his striving, they may later be of some influence upon perception and reaction of the handicapped as this isolation usually never fully succeeds. Encouraged by the results of Dr. Bach, I collected some 50 drawings of different handicapped children and it is too early to generalize from this material. Nevertheless, some indication may be given as to what could be looked for. It seemed helpful to ask the children to draw a fruit tree beside the completely free picture, because the fruit tree seems to offer some expression within an identification relatively far from consciousness as other Swiss research has shown (Koch). The drawings I collected were of highly differentiated expression. There are indeed some trees one could call crippled like the one made by a boy with predominant spastic paraplegia (c.p.) and some involvement of his arms who could walk with braces, which may indicate a general feeling of being restricted and which could account for the frequent aggressive releases of such feeling the boy shows. In other drawings a copy can be found of the body position which becomes constellated in the patient's limping movement. A considerable number of trees have cut branches, a sign usually regarded as indicating psychic trauma (Koch). In others, the ground line is missing indicating that reality has become kind of far away but this may be conditioned by the life in an institution rather than by the handicap. Some patients with coxitis even show a specific sign, on the top of the tree trunk, but in general there is a high diversity of expression. Studies of dreams by Lange-Cosack and others never came to definite results. Some children dreamed about themselves as able-bodied, some others, who were fewer, as handicapped; sometimes, according to my own experience, this change happens for the same person from one dream to the other or even within one single dream. Reflection of danger and anxiety can be seen sometimes in the context with the handicap within a dream but all these signs are very difficult to generalize. This is no wonder for it converges with the result of some clinical research which I would like to mention finally. Although there was not too much long-term analytic treatment with physically handicapped patients, of which little has been published, the reports usually showed that the disability loses its specificity as soon as it enters the individual dynamic processes of one person. (Laiblin). It becomes associated with the complex psychic pattern built out of the person's life experiences and usually it is given a certain position in the person's neurotic arrangement. As soon as the existing handicap is used within that arrangement it gains a specific meaning and is given a role defined by the needs of the arrangement. This proves the high adaptability of the handicap within man's life. The meaning may change as the inner constellation changes. Only a higher number of individual studies of handicapped persons will be able to define in what type of roles a handicap is likely to be used within the neurotic and non-neurotic life arrangement, what meaning it may gain for the person, how close it is correlated to anxiety and perception of danger and how it is differently reflected in a more conscious self concept and in a deeper underlying body image.

Summarizing this report, one is struck with the high general similarity of the development of special education in Germany and the U.S. The sequence of questions is always the same. This is no wonder for the problem remains the same. One gets an impression as if different instruments are delineating the same shape.

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PRODUCTIVE THINKING IN RETARDED CHILDREN

William Tisdall

This is the report of an experimental attempt to examine and compare the productive thinking abilities of educable mentally retarded (EMR) children in special classes with those of EMR children in the regular grades.

Over the years, three terms have been used to describe this area of study. They are Imagination, Creativity, and Productive Thinking. Whether or not these are actually labels for the same concept is difficult to say. The early writers generally employed the term Imagination. Later, a great deal was written under the heading of Creativity. Most recently, the term Productive Thinking has been used by many writers although some still prefer Creativity.

For purposes of the present investigation the term Productive Thinking is used and is defined operationally as thinking, manifested either verbally or non-verbally, which represents a respondent's performance on purported measures or originality, fluency, flexibility, and elaboration of ideas.

The term Educable Mentally Retarded describes children who, after psychological examination, have been classified as such and who have Stanford-Binet intelligence quotients falling within the 60 to 85 range.

The past decade has witnessed drastic changes in man's conception of the nature of intelligence. One of the primary contributions to this change has been Guildord's theoretical model of the "Structure of Intellect." This model, based on factor analytic research, has isolated, among other things, an operation designated as Divergent Production. It is the divergent production portion of Guilford's model which provides the theoretical foundation for the present investigation.

According to Guilford, divergent production is the creative component of thinking. It describes the individual's ability to vary his thinking in many different directions. In this type of production, flexibility, originality, and elaboration factors operate, and "variety of response is the rule."

Flexibility is a measure of the ability to shift from one class of thinking to another.

Originality measures indicate the uniqueness of a response. Essentially three degrees of response quality are possible: clever or high quality, commonplace or low quality, and bizarre or irrelevant. Elaboration may be defined in terms of the number of ideas used by an individual to build onto the basic response. A fourth factor, called Fluency of Ideas, describes the number of relevant responses given by a subject within a specified time limit.

The introduction of Guilford's paradigm has provided a point of departure for a great deal of recent research on productive thinking. The majority of studies in this area have, however, been concerned with intellectually gifted children and adults. The reports of the *Utah Conferences on the identification of Creative Scientific Talent* are exemplary of the subjects under investigation in the great bulk of studies. The Minnesota conferences on creativity in gifted children represent still other efforts.

In reviewing these and other studies one might raise the question of whether or not the ability to think creatively is an exclusive attribute of the intellectually superior. To date, relatively little attention has been given to the study of this ability in mentally subnormal children. And yet, if one is willing to accept the tenability of Guilford's Structure of Intellect, one must recognize that this theoretical model applies to the entire range of the intelligence continuum.

Taylor has indicated an unwillingness to accept the notion that only the gifted are creative. He maintains that the word "gifted" is a product of current intelligence tests, but that he employs very different types of tests in his search for the creative. He further contends that giftedness relates positively with high academic performance but that most school activities are not very creative in nature.

Wilson, et al., lend support to the notion that the intellectual element of originality is not a unique attribute of the gifted. They regard originality as a continuous variable which is possessed by all individuals to some degree.

Guilford states the case in a different way. He points out that none of the individual primary abilities are unique to the creative individual. He states, rather that all persons possess the several abilities in differing degrees since the abilities are continously distributed variables.

Bearing in mind the contentions of various writers that the creative are not necessarily the gifted, one might ask: "What is the research *evidence* for Creative abilities in the retarded?" The answer seems to be that there is no objective, empirical evidence to establish the existence of creative abilities in mentally retarded persons. Because of this lack of research evidence, the present investigation may be viewed as a downward extension of studies which have been, or currently are being conducted with the intellectually average and superior.

The mentally retarded may contribute little or nothing to society which could be construed as creative (although some have -- witness the work of the famed artist, Kiyoshi Yamashita of Japan; a purported mental retardate). We must realize, however, that the possible existence of any trait which may contribute to their maximum development warrants examination. Sarason and Gladwin have strongly recommended such research with the following statement:

> "It could be argued that many of the factors that Guilford obtained with his superior group would not be applicable to or simply would not be found among the retarded. This *may* be so but it would be a scientific mistake of no small proportion if such assumptions were considered as facts and prevented the kind of systematic research which is so desperately needed in this area. It would be our opinion that unless such research is done we not only may be kept from a better understanding of the retarded but we may also be misled in some of the conclusions drawn about

the significance of the interrelationships among the various factors in the superior individual."

Along with the attempt to obtain empirical evidence for the existence of productive thinking abilities among the retarded, an equally important question might be stated as follows: Under what educational conditions is the productive thinking of retarded children most likely to develop? It is to this question that the present investigation is primarily addressed.

If a retarded child attends public school, he has essentially two possibilities for educational placement; a regular class in which the curriculum is geared toward the academic needs of the intellectually normal child, or a special class designed specifically for the retarded.

The question of which type of class will most likely foster productive thinking in the retarded has never been answered on the basis of empirical evidence. To date, one could only assume that the class that purported to be most suited to the needs of the retarded child, i.e., the special class, would be the better situation for the promotion of the child's ability to think productively.

A more specific delineation of the possible reasons why the special class, as opposed to the regular grades, might offer more opportunity for the development of productive thinking in EMR children is presented as follows. These descriptions are based upon informal observation of the two types of educational environment which were studied in the present investigation and are stated on the basis of what is likely to happen, not necessarily what does happen in individual cases.

Reason 1. Qualifications of teachers

Special class teachers have had specialized training with EMR children. This includes the development of an awareness of the child's potential for responding.

Regular class teachers have had little or no training with EMR children. They may be unaware of the child's potential for responding.

Reason 2. Responsibilities of teachers

Special class teachers devote full time to working with EMR children. Here the needs of the individual EMR pupils are of prime concern.

Regular class teachers devote the majority of their time to working with non-retarded children. In such situations, the teacher may be more interested in keeping the EMR child busy than in helping him to participate in class activities where the origination of ideas might be nurtured.

Reason 3. Encouragement of idea formulation

Because the teachers of the special classes which were studied consistently employed the Directed Discovery method of teaching, the child is obliged to search his own response repertoire for the correct answer to a question or problem. In this way the child is encouraged to "think on his own."

It is more difficult for the regular class teacher to use the Directed Discovery Method because of heterogeneity of class and larger class size.

Reason 4. Sources of new ideas

Special class teachers were instructed to encourage open discussion of classroom topics at every available opportunity. Here again the formulation and presentation of thoughts and ideas is urged.

In the regular class, heavier reliance is placed upon textbooks and other "structured" instructional materials for the origination of ideas and topics. Such reading assignments may be too difficult for the EMR child with the result that he is less likely to participate in classroom discussion which is beyond his level of comprehension.

Reason 5. Activities aimed at idea development

In the special class, dramatization of ideas is stressed. This would serve to reinforce the "habit" of thinking of new ideas. By this means, more effective association of ideas is also developed.

In the regular class, dramatization activities are generally subordinated to more structured, book-oriented activities, where opportunities for gaining practice in the formulation of ideas are fairly well circumscribed.

Reason 6. Motivation for the offering of ideas

In the special class, the EMR child may give inappropriate or incorrect responses during class discussion periods without necessarily being ridiculed by peers of equal ability. Thus, motivation for volunteering responses is not hindered and the initiation of thoughts and ideas is not discouraged.

The EMR child in the regular grades, according to Johnson, tends to be rejected by his non-retarded peers. In such an environment, an incorrect response by an EMR child may lead to peer group ridicule and to eventual loss of the child's willingness to make overt responses.

Reason 7. Curriculum

In the special class, those aspects of curriculum which might aim at independent and productive thinking were developed with the EMR child in mind.

In the regular class, the curriculum is not geared toward the EMR child's specific academic needs. As a result, he may remain exposed only to learning situations where independent and productive thinking are, again, beyond his ability to comprehend.

Reason 8. Reading programs

The Experience approach to reading is employed in the special class. By this method, according to Jordan, the children "...create as well as reproduce the story, and can receive recognition for both kinds of activity."

In the regular class, the Basal Reader approach is usually employed. By this method, the children merely reproduce what others have written.

Finally, Reason 9. Size of class

With fewer children in the special class (maximum of 15) more time can be devoted to activities, such as dramatization of ideas, which encourage the origination of new thoughts.

In the regular grades, with a greater number of pupils per class than is found in the special class, less time can be devoted to activities which foster productive thinking within individual children.

On the basis of the foregoing discussion, the following research hypotheses were advanced:

Hypothesis 1: Educable retarded children in special classes will exhibit superior productive thinking when compared with EMR children in the regular grades.

Hypothesis 2: Intellectually normal children will exhibit superior productive thinking when compared with EMR children in either the special classes or the regular grades.

To test these hypotheses, the productive thinking abilities of 98 children were studied. Of them, 71 were educable mentally retarded and 27 were of normal intelligence. Thirty-nine of the EMR subjects were in special classes (experimental, or E group) and thirty-two were in the regular grades (control, or C group).

The EMR subjects were identified originally during the course of a larger study, being conducted over a four-year period at the University of Illinois, which aims at investigating the efficacy of special class placement over regular class placement of EMR children. These children were given their respective special and regular class assignments by a process of random selection. One-half of the subjects in each group lived in urban areas while one-half were from essentially rural environments. The intellectually normal subjects (normal, or N group) were from similar socio-economic backgrounds and attended the same schools as the EMR children. All subjects, except a few EMR children who had repeated first grade, had been attending school for two years.

The measuring instruments employed were previously devised by Torrance and his associates for the assessment of productive thinking in intellectually normal kindergarten and first grade children.

Three verbal and three non-verbal tests were included in the battery which was administered individually to each subject. Verbal responses were recorded verbatim while non-verbal responses were recorded by the subjects in the form of drawings. Although validity and reliability data are not yet complete on these instruments, they were the best available and most suited to the demands of the present undertaking.

Scoring standards were available for each test and three judges were employed to assign scores to subject's responses on all six tests. The judges were unaware of the group membership of the subjects whose test booklets they were scoring. Subject's responses were scored for originality and elaboration on non-verbal tests. Combined verbal originality, fluency, and flexibility, and combined non-verbal originality and elaboration scores were obtained. The means of the combined scores for each group of subjects were completed and statistical comparisons between the three groups were made on each of the five scores.

The Analysis of Variance Test indicated that significant differences between groups existed on the three verbal measures but not on the two non-verbal tests. Further analysis of the differences between the group means on verbal scores was made by use of the t test. It was found that for each of the three combined verbal scores, i.e., Originality, Fluency, and Flexibility, the means of the N and E groups were significantly higher than the means of the C group. No differences were found between N and E group means on verbal measures.

Both hypotheses were confirmed by the verbal test results but neither for the non-verbal test results.

The lack of differences between the three groups of subjects on mean non-verbal scores was explained in two possible ways. Either the insensitivity of the non-verbal test instruments precluded efficient discrimination between the three groups, and/or the instructional programs of the three groups of subjects were not sufficiently different in non-verbal, drawing activities.

The superiority of E group over C group subjects on verbal scores was explained on the basis of the nine presumed differences in the instructional programs of the two groups which were mentioned previously.

Two possible explanations for the superiority of N group subjects over C group subjects on tests of productive thinking are as follows. First, C group children were exposed to an academic program which was designed for intellectually normal children. As a result of this, the C group subjects were likely unable to comprehend a great deal of their classroom discussions and activities. Secondly, the very real possibility that the classroom offerings of C group subjects were rejected by their normal classmates leads to the conclusion that the motivation of C group children for the open presentation of their ideas could be reduced.

Post hoc examination of the data obtained from the two EMR groups led to several supplementary findings. The major findings, and the factors which may explain them, are listed below.

1. *Urban subjects from the E group tended to earn higher verbal productive thinking scores than did urban C group subjects. The urban E group was also superior to rural subjects from either the E or C groups.* This urban-rural difference might be attributed to personality differences which may exist between the urban and rural EMR subjects in the present investigation, or to differences in instruction which may exist between the urban and rural settings of the present study.

2. *Male subjects from the E group tended to earn verbal productive thinking scores which were superior to E group females and to both males and females from the C group.* The possibility that urban male children were subjected to less parental and social control, and were, therefore, less constricted in their thinking may explain this finding. This, along with the special class training of urban males from the E group, might serve to explain their measured superiority on verbal productive thinking.

3. *Relatively low correlations were found between verbal and non-verbal productive thinking scores.* This low degree of relationship might be attributed to the tests actually measuring different mental processes, the inadequacy of the testing instruments, or differential educational environment to which the subjects were exposed.

4. *Relatively low correlations were found between the non-verbal productive thinking scores.* The possibility that non-verbal measures were unreliable indicators of productive thinking may serve to explain the low degree of relationship.

5. *Low coefficients of correlation were observed between productive thinking and intelligence test scores.* This was not unexpected since the same finding has been uncovered by other investigators. It appears to indicate that the Binet Intelligence Test and the productive thinking tests used in this investigation measured different mental processes.

In reviewing the findings which have been discussed, some interesting possibilities for further investigation can be summarized.

There is, for example, great need for research into the techniques by which productive thinking abilities can be assessed. Further refinement of both verbal and non-verbal instruments is needed. Torrance and his associates are, at present, expending intelligent effort in this direction; including the problems of reliability and validity.

The question of why urban EMR children tend to excel over their rural counterparts on tests on productive thinking needs to be answered.

There is a demand for more knowledge of the relationship between productive thinking and intelligence. An empirical study which looks at the productive thinking abilities of intellectually bright, normal, and retarded children might prove to be a fruitful source of such knowledge.

Mention should be made of the need for further investigation of the efficacy of special class programs upon the productive thinking abilities of EMR children. The present investigation has indicated special class superiority in the fostering of productive thinking. The question of why this should be so remains unanswered. A logical extension of the present study would be a more highly controlled investigation of the effects of a training program specifically designed to develop productive thinking in special class, EMR children.

I would like to raise one final question ... Why is it that the creative or productive thinking abilities of retarded children had not been studied before? Perhaps there is a general belief abroad that to think of the retarded as creative is absurd. I must admit that when the idea for the present investigation was conceived, it could have been viewed as "going out on a limb." Yet, the results indicated that the verbal productive thinking scores of EMR children were not significantly different from intellectually normal children of the same chronological age. They further indicated that placement in special classes for the educable mentally retarded seems to enhance the ability to think productively. These findings do give one cause to reflect upon the nature of intelligence; especially when it is observed in retarded children.

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MEASUREMENT AND STIMULATION OF ORIGINALITY IN THINKING

E. Paul Torrance

When our staff began studying the development of the creative thinking abilities, first by cross-sectional methods and later by longitudinal ones, we were puzzled by what we discovered. It was clear that the intellectual abilities which we had labeled "creative thinking" did not follow the same course of development as other such abilities. For most of our measures of creative thinking, there were clear periods of decline rather than growth at about ages 5, 9, 13, and 17. We became particularly interested in the decline which appears at about age 9, or the fourth grade, because it was so acute and was accompanied by so many problems of behavior, learning difficulty, delinquency, and personality disturbance.

Many possible explanations were advanced for the decline in creative thinking and creative activities in the fourth grade -- physiological changes, increasing peer pressures for conformity, and many others. Knowing that the need for consensual validation and peer approval became tremendously important at about age nine, I placed a great deal of confidence in hypotheses in this area. Since anthropologists maintain that the United States has one of the most peer-oriented cultures in the world, we have attempted to test some of our hypotheses by conducting developmental studies in several cultures outside the United States and in segregated Negro schools in the United States. Now that the developmental curves for the creative thinking abilities of some of these cultures are becoming clear, the idea has been thrust upon us that the declines in the creative thinking abilities which occur at about ages 5, 9, 13, and 17 are the result of the stresses of cultural discontinuities and are accompanied by personality disturbances.

Using the measures of originality on three non-verbal tasks, I would like to discuss some of our findings and some of our thinking concerning this problem. First, I shall describe briefly the tasks used to measure originality of thinking in these cross-cultural studies. Then, I shall present some of the developmental data, review some of the discontinuities in our society, and discuss them in the light of data from five other cultures.

Measuring Originality of Thinking

Three non-verbal and six verbal tasks were used for assessing originality of thinking in the cross-cultural studies. Originality has been defined in terms of statistical infrequency of a response within the given culture. In addition, it was required that responses be relevant to the task, show intellectual strength, and represent some break away from the obvious, commonplace, and banal. Each of the tasks had undergone considerable developmental work, had yielded satisfactory evidence of test-retest reliability, validity, and ease of administration. From all of the evidence we were able to obtain, the tasks did not seem to favor one sex over the other or one culture over another.

In each of the cultures studied, approximately 1,000 pupils in grades one through six were examined. Native examiners were used in all cultures, instructions were given in the native language of the subjects, and subjects responded in their preferred language. Responses were then translated by expert linguists and afterwards scored by our own staff. Results of the non-verbal tasks are now available for our United States sample (pupils in a school system having great diversity), Australia, Western Samoa, Germany, India, and a sample from segregated Negro schools in Georgia. In Australia we obtained an urban and a rural sample, both in the Western part of the continent. The Western Samoa sample included schools in the larger towns and in the remote villages where white men seldom go. In Germany, the samples were from two different sections of Free Berlin. The samples from India included Moslem, Sikh, Christian, and Hindi schools in New Delhi.

Non-Verbal Tasks

The first non-verbal task is the Picture Construction Test which confronts the subject with a blank sheet of paper and a piece of gummed, colored paper in the shape of a "jelly bean." He is instructed to think of a picture which will make use of this piece of paper as a major feature. He is encouraged to think of "something no one else in the school will think of" and then to add other details which will make it communicate an interesting and exciting story. He is also required to make up a title for the picture.

The second non-verbal task, the Incomplete Figures Test, presents six incompleted figures to which the subject is instructed to add lines, thereby sketching objects or designs. The principle of closure operates to produce obvious responses as a result of primitive tendencies to effect closure in the quickest way possible through the addition of a straight line, circle, or curved line. The subject, of course, is encouraged to produce original, flexible (varied), and elaborate ideas and to compose titles for each picture.

The third non-verbal task is the Circles Test which consists of a page of 36 one-inch circles. The subject is asked to use the circles as the main part of the objects which they sketch. Fluency, flexibility, originality, and elaboration are encouraged by the instructions.

A time-limit of ten minutes was imposed for each task and in testing younger children, examiners recorded the titles in individual sessions following the group test. (A more complete description of these and the non-verbal tasks, their administration, rationale, and scoring is presented in my book, GUIDING CREATIVE TALENT (1962).)

Scoring for Originality

To obtain data for a scoring guide, a tabulation was made of frequency of the responses made by the subjects, separately for each culture. Weights from 0 to 4 were assigned on the basis of statistical frequency: 0, 12 percent or greater; 1, 5 percent up to

12 percent; 2, 2 percent up to 5 percent; 3, 1/2 percent up to 2 percent; 4, less than 1/2 percent.

Many of the responses are obvious and unoriginal in all cultures; others are common in two or more cultures; while some are common in only one culture.

Developmental Curves in Our Culture

A generalized developmental curve has been devised which holds for most of our measures of the creative thinking abilities. It is based on data from studies by Andrews (1930) of pre-school children and research by me and my associates of elementary, secondary, and university students.

It will be noted that beginning at age three there is an increase until a peak is reached at about age 4 1/2 years. A drop occurs at about age five at about the time the child enters the kindergarten and is followed by increases in the first, second, and third grades. At about age nine, near the end of the third grade or at the beginning of the fourth grade, there is a rather severe decrement in almost all of the creative thinking abilities. Then comes a period of recovery, especially for girls, in the fifth grade. This recovery, however, is largely in fluency and not in originality. The recovery in originality comes largely in the sixth grade. After this, there is another decrease in the seventh grade with recovery in the eight and continued growth until a peak is reached in the eleventh grade. After this, there is a levelling off or slight drop near the end of the high school period. Although I have not charted carefully the course of development for the remainder of the educational stages, almost no group studied has thus far exceeded the performance of eleventh graders. Studies of the performance of many individuals under many different natural and experimental conditions suggest that decrements continue to occur during other crises or discontinuities throughout the life span.

It is interesting to note that each of the generalized drops occurs at ages at which the transitions from one developmental stage to another begins. Using Harry Stack Sullivan's conceptualization of the stages of development of interpersonal skills, the drop at about age five occurs with the end of the childhood stage and the beginning of the juvenile stage with its demands for social accommodation and compromise and acceptance of authorities outside the home. The second drop occurs with the onset of the preadolescent stage with its increased need for consensual validation, peer approval, identification with peers of the same sex, and conformity to peer norms. The third occurs at the onset of early adolescence with its increased anxieties, striving for approval of the opposite sex, and the like, all of which restrict many areas of awareness and impose new demands for conformity.

Developmental Curves in Other Cultures

The shape of the developmental curves for originality in other cultures should help us determine whether or not the various drops we find in our culture are biologically or culturally determined. The mean originality scores for each grade-level for each of the six cultures is shown in Table 1:

Table 1

Mean Originality Scores on Non-Verbal Tasks for Grades One Through Six
for Six Cultural Groups

Grade	Austr.	U.S. Negro	Germany	India	Samoa	U.S.A.
1	17.37	14.58	19.50	14.88	12.72	22.95
2	17.19	22.35	16.53	13.59	15.27	28.20
3	15.24	21.42	15.75	17.64	16.08	30.90
4	20.16	26.07	19.83	15.00	18.60	26.40
5	20.76	-	28.44	20.73	19.53	24.90
6	19.83	-	26.07	24.42	22.50	33.30

It will be noted that there are no drops in the developmental curve for the Samoan subjects. The level of originality begins in the first grade at the lowest level of any of the cultures but the growth is continuous from year to year. The second greatest continuity in development is shown by the U. S. Negro sample. A slight drop occurs between the second and third grade but there is considerable growth between the third and fourth grades. Through the fourth grade, German and Australian children seem to show about the same level and pattern of development. Pressures towards standardization and conformity apparently occur quite early, especially for the Australian child. German children show tremendous growth between the fourth and fifth grades but the Australian children remain at about the same level in the fourth, fifth, and sixth grades. The pattern of growth among the children in India is much the same as in the United States, though the level is considerably less. (Incidentally, the level of the children from India is comparatively higher on the verbal than the non-verbal tasks, while the reverse is true of the United States Negro sample.)

Now, let us examine some of the evidence concerning the continuities and discontinuities, especially in the United States and Western Samoa, to provide a preliminary test of the hypothesis that cultural discontinuities are accompanied by discontinuities in the development or originality of thinking.

Evidences of Discontinuity in Our Culture

Many of the evidences of discontinuity associated with drops in the developmental curves for the creative thinking abilities can be related to the new demands identified in connection with Sullivan's developmental stages, already sketched. A number of others have come to our attention as we have tested school children and observed them in classrooms and playgrounds. A few of these will be reviewed.

We have observed that concerns about sex appropriateness and emphasis on sex differences become tremendously inhibiting at about age five and continue into the beginning of the first grade. For example, we found that boys at this age would frequently refuse to offer any suggestions for improving a nurse kit and some girls similarly refused to think of ideas for improving a toy fire truck. Some of the more creative boys, however, first changed the nurse kit to a doctor's kit, after which it was quite legitimate and respectable to think of ideas. Thus, we see that whole areas of experience become taboo, and thinking thereby inhibited.

Many children at this age are inhibited in their thinking because they have been warned harshly by parents and teachers that they must eliminate fantasy. Although we are interested in developing a sound type of creativity, we need to keep fantasy alive until the child's mental development is such that he can engage in this sound type of realistic, creative thinking. Frequently, in individual testing, it has been apparent to me that a child had thought of an idea. He will smile or grin broadly and begin to speak, only to let the smile change to a painful frown and the eager utterance to fade into silence.

We have given more detailed and extended attention to the discontinuities which occur at about age nine when the child reaches the fourth grade. I have discussed this problem with a number of gifted sixth graders and they point out many influences which they feel coerced them to become less imaginative, curious, and original in their thinking at about this time. They first point out, "Well, when we went into the fourth grade, we are half-through elementary school and they expected us to act more grown up." As such a discussion continued, they pointed out that in the fourth grade they had to begin sitting in orderly rows in the classroom and keep their feet on the floor. Their classroom activity became more organized and formal. They received credit only for what they put on paper. The animals in their stories did not talk. Usually, they had to go to another building or upstairs in a two-story building. They had to start doing homework and their papers were expected to be neat with no smudges. The subject matter became different; they began having lessons in geography, history, and the like. They began taking part in student government and started serving as monitors of their fellow student's behavior.

As we tested children of this age, we were impressed with the inhibiting influences of their preoccupation with prevention and fear of making mental leaps. The problem, "What are all of the possible things Mother Hubbard could have done when she found no bone in the cupboard for her dog?" was easy for younger children but extremely difficult for the nine-year old. The nine-year old is so preoccupied with the notion that Old Mother Hubbard should have prevented this predicament that he cannot think of how she could have gotten herself out of it. They also want to stick close to the stimuli and resist making mental leaps. In the Product Improvement Task this seemed to stem from the inhibitions surrounding cost, in many cases. Uncertainty expressions become frequent. These phenomena have been observed and documented by other investigators. For example, L'Abate (1957) found that nine-year olds showed a greater use of "uncertainty expressions." Professional workers in the field of remedial vision have also told me that they have observed this uncertainty in their work with children this age. On the Rorschach Ink Blots, they will say that they are not as imaginative as other children, that they can't make anything out of the blot, and the like. They will practice visual-training exercises endlessly but fail to make progress, continuing to be uncertain, hesitant, and slow in their perceptions.

In working with teachers, it has also become apparent that many teachers in the intermediate grades live in quite a different world from their colleagues in the primary grades. Their training has been different, their attitudes towards children are different, and their methods of instruction are different. Many intermediate teachers admit frankly that they have no idea what goes on in the primary grades.

In our research we have also found that teachers of the intermediate grades say that they talk with children about their creative writing in ways which are quite different from the ways teachers in the primary grades say that they talk with their pupils. The primary teachers were the more willing to sacrifice preoccupation with correctness for creative values.

As a youngster enters the seventh grade, he usually has to go to another building, frequently in another part of the town or city. The school is usually larger and there are different teachers for each subject. There is much emphasis on promptness and tardy slips have to be dealt with. Extremes in dress and appearance are discouraged -- that is, deviations from what all the others are wearing. There are new pressures and anxieties concerning the approval of the opposite sex. Pressures to be well-rounded socially and athletically are also intensified.

Apparently the transition from junior high school is marked by greater continuity than that from elementary school to junior high school. Since our developmental data are based on samples from schools having both junior and senior high schools in the same building with a continuous organization, this aspect of continuity-discontinuity may be operating. Our data would suggest that there may be some discontinuities introduced into the senior high school at about the senior year. Since high school seniors are faced with the immediacy of the transition to college, work, or military service in their senior year, this may serve to introduce discontinuities. There are new demands for grown-up behavior, sanctions against regression to childish thinking and behavior, and the like.

Continuities and Discontinuities in Other Cultures

Since the development of originality of thinking shows greater continuity in Western Samoa than in any of the other cultures studied, it seems desirable to examine the Samoan data in considerable detail. Margaret Mead's pioneering work (1939), reports of modern observers (Johnson, 1962), and the data of this study support a picture of high cultural continuity and suppression of creativity and independence of thought almost from birth.

According to Margaret Mead, "Keep still," "Sit still," "Keep your mouth shut," and "Stop that noise" are thoroughly ingrained into the Samoan child. He is not even permitted to cry. The older children are given responsibility for disciplining the younger ones so conformity is taught from birth. Even today, Samoan teachers place an unusually high value upon quietness as a desirable characteristic on our "Ideal Pupil Questionnaire." Mead pointed out that Samoans were imitative and reproductive in their crafts rather than creative. Likewise, today we find that Samoan children excel in the craftmanship of their drawings, when administered the Goodenough Human Drawing Test or Buck's House-Tree-Person Test. Their drawings are reproductive rather than creative. The characteristic most valued by Samoan teachers in their pupils is remembering well.

Both Mead and modern observers stressed the role of the extended family, the participation of all ages in the life of the community, the mixing of all ages, and the like. Mead used these facts and the continuities in regard to sex in explaining why Samoan adolescents did not experience the periods of emotional upset and personality disturbances common among adolescents in the United States. In today's Samoan schools, there is no strict age segregation and a wide range of ages is found in a single grade, especially in the remote government schools.

The characteristics ranked highest by Samoan teachers on the Ideal Pupil Checklist are: remembers well, healthy, and always asking questions. From other data, it is obvious that "always asking questions" means something quite different to the Samoan teacher than to the United States teacher. It was even difficult to administer the test of creative thinking to Samoan pupils; they continually asked such questions as, "Is this all right?" "Is this what you want?" and the like. Samoan teachers tended to rank the following characteristics lower than did the teachers of other cultures: adventurous, a self-starter, curiosity, determination, energetic, independent in judgment, industrious, self-confident, self-sufficient, sincere, thorough, and versatile. They tended to place a higher value than did teachers in other cultures on such characteristics as being a good guesser, competitive, prompt, haughty, physically strong, and quiet, and liking to work alone. In general, this pattern of values is likely to support cultural continuity and a generally low degree of creativity.

Johnson (1962), who directed the collection of the data in Western Samoa, identifies three major factors underlying this pattern. First, he sees this pattern as being deeply embedded in thousands of years of Samoan history. A strong patriarchal family system evolved with emphasis on a chain of command, the highest decisions being made in the village "fono" of chiefs and passed down to submissive subjects. Acceptance of authority relationships was apparently rewarded and regarded as an ideal characteristic. A second influence is a function of the influx of missionaries and German traders since the early 1830's. Here also the emphasis was on submission, either to God and his "special representatives" or to the traders who needed submissive workers to take care of the plantations. A third influence began with New Zealand's entance into the government of Samoa in 1914. With this came the idea of an extensive school system, school uniforms, leaving examinations, and uniformity of learning.

Both in the government and in the schools, the authoritarian, hierarchal traditions, were extended. In other ways, however, the schools introduced by the New Zealanders do not reflect the culture of the people. This is apparently more evident in the remote areas of the island where government educators inspect the schools regularly but this is the only contact the people have with the "palagis" (whites). The school is modified somewhat but the culture of the village hardly changes.

Johnson cites the example of Faleolo to show how thoroughly imbued students are with the attitude of doing nothing until told. Faleolo was the housegirl of one of the teachers, and performed quite well the tasks assigned her. When the teacher returned from a two-day trip, he discovered that the girl had not eaten during the entire time. When he asked her why she had not, she replied, "You didn't tell me to eat." In the Samoan home, children are told each thing they are to do.

Johnson also remarks concerning the excellent memory of Samoan children today. Memory is important in the leaving examinations stressed in the school system. (One question in the 1960 examination was: "How many eggs does an earthworm lay in a season?") Mead, about 30 years ago, observed that Samoans were notorious for their poor memory. Although this emphasis on memory for the great mass of Samoan children may have come with the mission and government schools, memory has long been important in Samoa. Thus, Samoan leaders had to memorize tapa designs, history, legends, songs, and rituals.

It is interesting to note that along with the importance attached to remembering, Samoan teachers regard a "good guesser" with high favor. Johnson relates that on occasion he has placed a mathematical formula on the blackboard, had students work out a proof, asked a question about the formula which would necessitate an obvious "no" answer, given deliberate but subtle "yes" cues with his head, and received incorrect "yes" answers by almost everyone in the class.

Apparently, a number of discontinuities are creeping into the Samoan culture in the more urban mission schools. Many of the Christian taboos are contrary to the traditions of the culture. Johnson recounts one incident in which two adolescent boys came to him as a counselor, requesting that a certain girl be expelled. Johnson recognized the accused girl as the school's leading scholar and model of circumspect behavior. Puzzled, he sought to learn the reason for the boys' request. They explained simply that whenever they touched her that she hit them, behavior approved by the school but disapproved by the culture and upsetting to the cultural continuity having to do with sex relationships.

Thus, in Western Samoa, the problem of increasing originality in thinking seems to be one of how to introduce cultural discontinuities without producing undue personality conflicts and disruptions in the development of thinking abilities. In the United States, the problem seems to be the reverse: how to reduce the cultural discontinuities without retarding creative development.

Although the limitations of this paper do not permit an examination of the data from India, Australia, and Germany and from United States Negroes, I would like to say that thus far the results are in harmony with what has been presented here. The date from India are especially interesting. No break was found in the developmental curve for the sample from an orthodox Sikh school, yet the general level of originality is lower than in any of the other six schools in the sample from India. The two Indian schools in which there is greatest discontinuity in the development of originality are characterized by the diversity of their pupils. Both are co-educational and enroll children from a diversity of religious, linguistic, and socio-economic backgrounds. There are numerous evidences of cultural discontinuities which will be described in another paper.

Reducing the Discontinuities in United States Education

As I have explored with imaginative, creative teachers, the problems associated with the drops in creative thinking ability at various periods, I have found that many of them have devised ways for reducing the discontinuities. Frequently, however, they have had to violate school rules and policies in order to carry out these procedures

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One important problem is that of determining whether or not the reduction in cultural discontinuities will reduce the drop observed in the creative thinking abilities as measured by our tests. Positive clues concerning this issue, however, were obtained from studies of the creative development of the pupils of two fourth-grade teachers in our project. The pupils of these two teachers did not experience a decline in their creative development during this period. In both cases, it seems obvious to me that the teacher did many things to reduce the discontinuities and their stressfulness. One of them permitted his pupils to continue experimenting in the fourth grade with different seating arrangements, as they had done in the third grade. He did not insist that they sit in rigid rows with their feet flat on the floor. He kept them writing poems, stories, plays, and the like and their inventions continued to have a place in the classroom. These activities were so exciting that the instructor did not have to make his pupils waste time in writing 500 times, "I will not whisper in German class" or "I will not run in the hall." Along with their continued creative development, they also experienced more than the usual growth in reading, language, study skills, and arithmetic. Similar observations could be made concerning the second teacher.

If we are able to establish more firmly that some of our cultural discontinuities are associated with personality disorganization and decreased mental functioning in certain areas and that some of these discontinuities are unnecessary, imaginative teachers, curriculum workers, and administrators should be able to devise and evaluate the effects of changes which will reduce these discontinuities.

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TEACHERS FOR GIFTED LEARNERS - SELECTION VERSUS TRAINING

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The objective of this paper is not to reiterate what the literature says about the preparation of teachers of the gifted, but rather to delineate certain tasks or elements in the teaching-learning process which are both feasible and desirable in the development of intellectually superior youngsters, and at once neither practicable nor necessary in the formal education of other than gifted persons. If valid, these identified elements may provide clues to additional facets of teacher education; on the other hand, the principal burden of the endeavor will be to emphasize the significance of *selection* over *training*. Experience increasingly indicates to the speaker that certain of the more critical teacher competencies come by virtue of what the person is intrinsically, rather than what he can be *made* through formal education. Training, of whatever form, in these respects may inescapably comprise another instance of "too little, too late."

Part of the background for the present consideration is the frequent claim that there is nothing "special" about teaching the gifted, and nothing "extraordinary" about proper curricula for them; but rather that almost any reasonably good teacher can provide sufficiently for their needs within the structure of the established curriculum.

An abusive interpretation of the biological principle that intro-species variations are quantitative in nature, not qualitative, seems to underlie these contentions. What appears unfortunately to be ignored is the fact that degree differences are as real as are differences in kind; and that extreme differences in degree may render possible and desirable departures in educational treatments as radical as though variations in kind were involved.

The nurture of deviant human capabilities is *not* an ordinary matter to be accomplished by ordinary persons and by ordinary means. All-star learners, like all-star athletes, need and can profit from extraordinary devices and special processes geared exactingly to their distinctive potentialities. Common-sense observation is enough to note the contrast between the typical teacher's task with an unselected group of youngsters engaged in the usual practice of lesson-learning, as against an imaginative teacher constructively channeling the flow of ideas from a special class of gifted children in attack upon an appropriately complex problem. In such contrasts, Professor Herbert Carroll once suggested, the differences in degree are so marked as to *appear* to be differences in kind.

In this paper, certain distinguishing qualities in the teaching-learning act at the extreme positive reaches of human capability will be isolated, differences which comprise this kind of *degree-reality*. Which among the inferred competencies of teachers can be accomplished by formal training is for each to test by his preferred methods, the speaker's own bias toward selection having already been indicated ?

Distinctive Qualities in the Education of the Gifted

Only an illustrative account is possible within the limits of time on this occasion, and probably within the personal limits of any one individual. Three process-elements will be noted as relatively unique to the specific purpose, predominantly pertinent in the instruction of the superior learner, and mainly awkward, ineffectual or unnecessary elsewhere.

Quality of Discourse. The first of such distinctive elements involves the characteristic manners in which basic psychological processes take place. At the level of all phases of learning act perceptual intake, mediating mental phenomena, and behavioral output - differences in the actualized potential of bright children make a difference in the kinds of educative treatments which are possible.

In the communicative interchange between typical teacher and typical students, the content is likely to be close to the *perceptual* level. The teacher's presentation will thus be a recapitulation of fact or directly applicable principle, and the pupil's response in the order of a reproduction as faithful as possible of the teacher's presentation of that of the text. This type of exchange is apparently satisfying, for rebellion against it is confined to the deviant few. The type of mentality represented on the part of the pupil is illustrated by the response on the Binet item picturing a messenger boy and a fallen bicycle, where the usual response is either an enumeration of unrelated detail or a description of the apparent situation. Bright children, on the other hand, are known to respond with embellishments that lie well beyond sensory intake and perception, and which indicate relationships and imaginative constructions among the observable details.

Now the teacher who relates adequately to the mentally gifted youngster must provide and shape discourse which reverses the usual percept-concept ratio, and takes place for the most part at a plane on which immediate perceptions are transformed to conceptual abstractions. The rapid fire exchanges noted in discussions among gifted children, it may readily be seen, are only incidentally concerned with fact, and in the main involved with various kinds of subjective constructions - reformulations, inferences, interpretations, judgments, etc. - which lie beyond the apparent and observable.

The question arises: What does this characteristic of the teaching-learning process mean in terms of the education of teachers for the gifted? Will the typical teacher be able to rise to this plane of discourse simply upon finding it to be indicated in a professional education course on the gifted? Or is effective behavior of this kind not more nearly the spontaneous and characteristic usage of persons particularly endowed? That the answer lies less in training than in selection appears to be a reasonable inference.

Cognitive Style. Certain immediate and continuing by-products of educative experience can be identified as the attainment of a manner or style of thought and behavior which offer most promise for the necessary interaction between individual genius and the social organism to which this genius must relate.

One: Modes of mental operation which emerge without deliberate attempts to reckon with their shape and character may serve the individual to disadvantage. A ponderous, awkward and somewhat inflexible manner of thought - should this not be deliberately retrained? And yet how much can spontaneously established structures of mind or personality be modified without violence to the total functioning? And beyond this, how much brilliance, and how much flexibility are more advantageous than resolute adherence to a singular aspect of thought.

Two: Principles which when deeply perceived conflict with others equally sanctioned - what proper and satisfying resolutions of such conflicts can be found? Self-interest versus social conscience, for instance; wisdom in decisions about human affairs, versus sheer logic; stubborn perseverence with one's own conviction about a course of action, versus a disposition to be guided by consensus; doubt versus faith, how much of either is good and on what kinds of problems; the cultural relativity of morals versus the moral absolute, what limits prevent liberalism from becoming license?

Three: And wonderment about the human quest, the human career and proper expectancies of the individual: How big are worthy contributions to thought, science, or art? How long did Darwin seek after his convictions about species development? What would Churchill have been without war? How completely original must an original experiment be? What exactly, is great about Lincoln's reflections upon Gettysburg? What are some of the more reliable signs in youth of significant creative potential?

Consider all these kinds of problems as one -- that of shaping the "self" through experience, and of knowing this self, which implies inevitably knowing the society in which this self must be realized -- and call the whole array of subjective questing, reckoning with nature of effective behavior, with principles which trouble because they make too much sense, and with uncertainty as to what one's destiny in human affairs is intended to be -- and we have the problem of cognitive style.

The role of the teacher with gifted individuals in these problem areas is enhanced - the problems become distinctive from typical self-attainment of persons of the generality - on the score of infrequency of models. It is rare rather than frequent that children to whom these questions are essential find peers with similar needs; it is rare that they find models in "children's" literature of today, and in the mass media through which thought is exchanged. For these reasons, the worthy teacher may be among the priceless few external sources through which certain of the gifted child's most poignant yearnings may be picked up and channeled, understood and supported.

Again, then, what kinds of professional training equip the teacher for effective guidance of sensitive children through the process of attaining cognitive essence that comprises a best self in this rarified sense? Or, once again, do understandings and skills of this nature come by other means?

Role Applicability. The final distinctive element in a proper kind of developmental experience for gifted persons refers to the kinds of applications they tend to make of the kinds of learning described in both the qualities detailed above. My contention is that appropriately transformed educational experiences should lead from inquiry and "acquiry" (this is the newly advanced pedaguese) to the equally unique applications in the typical adult social role of the deviant and deviantly educated person.

Education in this vein requires a somewhat unusual approach to the role of knowledge in education. The twentieth century forward thrusts in science, both natural and social, and in the technologies which spring therefrom are a matter of common reference. Yet the school seems still to consider the direct, one-to-one transmission of knowledge in its present state to be its main business. What becomes known is what is taught and learned. Now a more fundamental but less direct involvement of the various bodies of information that have been evolved and codified, and that are continuously changing, is possible for educative purposes. This is an attack upon learning through an epistemological frame of reference. There are better substitutes for the main engagement in immediately perceivable fact and principle, representing the material and ideational universe as it is here and now, a plane of experience upon which the gifted youngster is his own able and sufficient servant.

Instruction for the gifted learner should be comprised of the nature and techniques of the several modes of inquiry which have proven useful to man's diverse purpose and which lead to the present developed content of any science or art. It should include a direct study of the principal sources of present knowledge, recorded catalogues, libraries and depositories of specific information, and men and institutions whose contemporary accomplishments promise still further productiveness in given aspects of human culture. And such studies of the root nature of knowledge, as distinct from its transitory blooms, should and can through generic treatment spread over the full range of man's learning, rather than over the parsimonious fragments in the usual instance pieced together and dispensed as school curricula. It is understanding about knowledge, rather than knowledge itself, which is the fair objective of education for those with whom the acquisition of simple knowledge dictated by needs of the moment is comparable to the taking of breakfast and lunch as dictated by hungers of the body.

Only this kind of approach to knowledge can equip the creative youth for effective conduct of his adult role as reconstructionist. And exactly this kind of approach to knowledge is both impossible and unnecessary for those destined in the main to operate within the familiar form and essence of human culture. This is what makes the education of the gifted considerably a unique phenomenon, and what requires that the teacher have special competencies. It is doubtful that the typical classroom teacher ever arrives on his own initiative at this level of analysis. Rather this plane of mental engagement can best be traversed by reasonably gifted persons whose own intellectual needs have led them there, and continue to lead them there in the face of every new problem which is encountered. So here again, the problem of teacher selectivity is thrown squarely against the hope (or lack of it) of generating teacher effectiveness through training.

Conclusion: The Critical Importance of Teacher Selection

The effective management of educational experience within these disciplines, we have attempted to indicate, is a professional speciality that requires specialized competencies. The quality of discourse, the immediate by-product of cognitive style, and the ultimate applications of learning, or uses to which the deviant and deviantly educated individual puts himself - none of these elements described herein apply in the main to the proper education of youngsters destined by endowment principally to carry on the work of the world rather than to make the breakthroughs in thought and practice of each succeeding generation.

In calling for teachers who can conduct the educative process on this purposefully transposed plane, we are not asking for miracles. Teachers with the essential basic stuff of mind and personality do not abound in the present ranks of the profession; nor, on the other hand, are they non-existent. Oftentimes, persons of the right sort do not have the opportunity to conceive the educational task at this plane either in their professional preparation or in their professional assignment, the result being that the most excellent kinds of teaching for children and youth under present consideration becomes subdued, inhibited, or actively suppressed by a system chiefly concerned with modality.

The semantic framework within which these particularized task-competencies are conceived is important. A modification can profitably be made in the demand (which the speaker has made in an earlier treatment) that teachers of the gifted be among those of "greatest general excellence." Even though social utility still urges this exact practice, it is more defensible democratic policy to consider that teachers themselves differ, as do their children in aptitude and preference and temperament, and that the central problem is to select from among available functionaries those specifically qualified for given functions. In this manner, perhaps specialized competencies for one or another of the tasks identified as distinctive may be performed selectively from several groups by a given specialist.

The most important consideration, however, is that particularized excellence for the task of educating the gifted become the goal for persons carefully selected for predisposing tendencies; and that in this manner *equally excellent* but *distinctively different* kinds of teachers and teaching can become the goal for youth who are handicapped and for those without educationally significant deviance of any kind.

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DIMENSIONS OF ASSESSMENTS

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The current interest in assessing the results of our practices in remedial instruction, particularly in reading, is certainly commendable, but we need to be alert to the notion of assessment as a *process* as well as an end product. In spite of the multitude of materials and machines which have been utilized in remedial reading programs during the past decade or so, much of the effort to help the disabled reader has been rather routine and nonspecific, and much of the effort to determine what progress he has made has been unimaginative and narrow in scope.

The concept of "assessment" is a provocative -- even a provoking -- one. It implies not only "counting" changes but "accounting" for them. It requires not only that we record data, but that we relate them to a total picture. T. E. Newland has expressed this distinction very well in his discussion of psychological assessment of exceptional children and youth. He states:

> "The words "testing" and "assessing" definitely mean different activities. The term "testing" will be used to denote the exposure of a client to any given device, whether group or individual, especially for the purpose of obtaining a quantitative characterization of one or more traits of that client. "Assessing" on the other hand, includes both this quantitative depiction of the client, and the qualitative and integrated characterization of the client as a dynamic, on-going, total organism functioning in a social setting."

Newland thus reminds us that assessment of the changes which have occurred in an individual must take into account not only the evidence of performance on testing devices but also the functioning status of the person in a larger setting.

We have selected the term dimensions to denote this larger setting. By dictionary definition the word dimension means "a measurable extent." We are thus maintaining that, in order to assess progress in the course of remedial reading instruction, we must make several kinds of measurements, and that some of these measurements should occur in the general social environment as contrasted with the special tutoring environment. Whether we prefer an elaborated or a simplified description of reading, the fact remains that the reading process -- and the process of learning to read -- is quite complex. Evaluation (or assessment) of changes in what we may call "reading behavior" must consider many relevant functions, i.e. perceptual, integrative, and motivational. Only the very naive instructor could be contented with a global "grade level" score. In essence, the assessment process consists of synthesizing evidence which has been obtained on a range of relevant behavior before, during, and following the special instruction. It must include observations of the individual and of his environments, and observations of the individual acting in his several environments, i.e. the tutoring conditions, the classroom conditions, and even the home conditions.

We are accustomed to measuring various aspects of the individual, such as his gross reading performance and achievement (expressed usually in grade scores) in other school subjects. We are also familiar with the procedures for assessing what we presume to be intellectual status as it is expressed in test age (or mental age) or "intelligence quotient." We take for granted that general information about visual and auditory acuity is relevant to the child's success or lack of success. More recently attention has been paid to perceptual and integrative dysfunctions which appear to interfere with school learning. Observations and comparisons of these types of activity (i.e. behavior) can contribute many clues for investigation and evaluative interpretation by the clinically sensitive reading specialist.

Changes in work habits or "sets" are also important in the total assessment of progress in remedial reading. Impressions of such changes should not be dismissed categorically because they are "subjective." Instead, they should be carefully recorded along with the descriptive behavioral evidence which seems to support them. It is through such procedures that subjective data eventually attain a degree of reliability and objectivity.

Perhaps the most neglected, yet probably the most significant area for inquiry in the assessment of student progress in the remedial program is that of changes in the student's concept of himself as a person and as a reader. Granted, it is extremely difficult to ascertain how the student views himself, with particular reference to his learning difficulty. The reading instructor without formal training in the use of diagnostic tools for studying personality can nevertheless make valuable observations through informal conversation and "piecing together" of such information as can be gathered from various sources. The significance of this kind of information was dramatically illustrated in the case of Betty Jean, a 13 year-old "non-reader" of at least average IQ who, it was discovered quite unexpectedly, thought that she must be "not right" (i.e. her equivalent for "insane") because she had such difficulty in reading. When it was pointed out to her that the difficulty was due to the fact that somewhere in her school experience someone had failed to help her learn to listen to sounds and to "blend" them (a concept which she readily grasped). The change in outlook was almost miraculous and progress was made at a rapid pace. We do not know how much of this girl's desperate plight was due to her inadequacy in word attack skills and how much was a function of her anxiety about herself.

Not every young person will reveal his burdens so clearly as Betty Jean did, but it has been our experience that the majority of reading clients experience concerns of similar character and equal weight. We, as a profession, are only beginning to appreciate the impact of any type of disability or dysfunctioning upon the individual's estimate of himself as a worthy and competent human being. How the child or teen-age student regards himself at the beginning of the remedial program, and the changes which occur during the progress of treatment -- whether they can be attributed directly to the instruction or not -- are items of critical importance. Granted that the path of progress is seldom smooth or direct, it is nonetheless necessary for the remedial instructor to make every effort to gauge the feelings of students. Evidence of growing independence in suggesting alternatives or in the freer expression of preferences, even of criticism, are useful signs of changes in self-perception.

Gains in reading behavior, whether they be in the traditionally recognized areas of skills or in the area of personality changes, should be assessed not only in terms of the absolute status of the individual's performance but also in terms of the conditions under which he is required to work. Thus, a very small measured gain made against great environmental odds represents an amount of achievement which is better described as a moral victory than reported simply in terms of the small increment of a few months' gain. Data obtained on home and school conditions are frequently recorded but seldom fitted into the situational framework. It is not uncommon to work with children who are beset both at school and at home by antagonistic adult attitudes. Too often the child is expected to master his difficulties without friendliness or support from those adults who we would most reasonably expect should feel a sense of responsibility for his welfare and for his instruction. Such a child is often given "one last chance" to show improvement and then psychologically abandoned.

The problem of assessment is not simply to determine how much and what kind of change has been effected during the course of remedial instruction, but rather to determine whether the child is making better use of his energies in terms of the conditions under which he has to operate. Observable evidence of such improvement may be expressed in terms of five major considerations: (a) greater accuracy in his responses to printed material; (b) greater dependability of his responses, i.e. retention; (c) greater strength of his responses, i.e. confidence; (d) greater speed of his responses; and (e) a reduction in the behavioral symptoms which have been associated with his reading deficiency. Improvement may be noted in only one characteristic or in several. It is generally hypothesized, although not yet definitely demonstrated, that alterations in one characteristic are associated with improvements in the others.

The work of the remedial reading specialist has received increasing recognition from other professions which are concerned with various aspects of child treatment and rehabilitation. A central consideration in this work, and one which has not been emphasized as strongly as it deserves, may be thought of as the "principle of amortization". This principle of amortization, which is concerned with the gradual extinction of inefficient reading behavior and the acquisition of efficient patterns, is the foundation of the remedial program. It implies that there must be an allowance made for recovery as well as for new gains; i.e. that time must be allowed for the elimination of erroneous or otherwise inadequate reading behavior. Therefore, in assessing the changes which have been made, we must bear in mind that the seemingly small gains made during certain phases of instruction may actually conceal a large measure of "recovery" from the previous condition. This concept is appreciated in other areas of disability; it is usually overlooked when the child or adult shows no visible evidence of his special need.

The purpose of this brief presentation has been to advance a clinical concept of assessment, particularly as it pertains to the evaluation of student progress in remedial reading. It is hoped that the revival of interest in the problems of assessment will result in greater concern about the *process* of assessing rather than in preoccupation with terminal scores as ends in themselves. In this connection it is further hoped that attention will be paid to the many facets of assessment which we have here labelled *dimensions*.

There are undoubtedly many school workers who long nostalgically for the good old days when there were few learning problems to cope with simply because children who presented learning difficulties (or were confronted by them) were officially discouraged from prolonged school attendance. Presumably things were simpler in those days -- or perhaps they were simpler only for the simple people. Neither then nor now would scientific enlightenment and professional integrity permit callous disregard for the disabilities, visible or invisible, which handicap a young learner.

It has been emphasized that assessment should include data gathering *and* data relating; that evaluation should be based upon comprehensive evidence of the individual's performance in each of his special environments. Attention has been called to the importance of the pupil's perception of himself and of his reading disability, and to the need for sensitivity to changes in self-perception during the remedial program.

Throughout the discussion, emphasis has been placed upon the qualitative aspects of assessment, not because of any desire to minimize the need for quantitative measures (they are necessary), but rather to focus attention on the point that quantitative measures are a necessary but not sufficient condition for assessment.

Finally, we have suggested a principle which we have called "amortization" to remind the reading specialist and others concerned with the problems of assessing student progress that gains should be measured from the point of actual departure and not from an arbitrary zero point on a grade-level scale. In a very real sense the process of remedial instruction in reading is a rehabilitative process, and the pupils in need of such services start not "from scratch" as the saying goes, but from behind scratch. That is to say that they more often than not have developed maladaptive behavior patterns (both in skills and in attitudes) which must be extinguished. The remedial process (or the rehabilitative process) must be concerned with both the extinguishment of maladaptive patterns and the acquisition of new, more efficient and effective patterns. To disregard this "recovery" feature of remedial instruction and to count gains only in terms of the new acquisitions is to underestimate the investment which the pupil and his instructor have put into the remedial program, and to minimize unrealistically the true measure of the distance which has been travelled.

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AN EVALUATION OF SELECTED REMEDIATION CASES AND SOME IMPLICATIONS

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As we talk about assessment of student progress in remedial reading a discussion of transfer of learning becomes essential. This is particularly true when remediation takes place outside of the child's normal classroom because it not only involves the transfer of skills but it also requires a transfer from one teacher to another and one physical setting to another. In remedial reading we are sometimes satisfied if there is enough transfer to permit the student to apply what he has learned to a standardized test; or, to have the student apply what he has learned to carefully selected reading materials. Both of these types of transfer are important, necessary, and desirable. However, can the skills learned in the remedial program be transferred to permit better student performance in the classroom? This is the topic which I shall discuss with you this afternoon.

Transfer, of course, is not automatic. Although many of us make the mistake of treating it as automatic, the facts do not justify an assumption that proper transfer will occur in this manner. I recall a high school teacher who was telling me of a student who was taking a new course in school called "Study Methods." The student made a very good record in this class and was awarded an A for a final grade. However, it was his only A; the student received D's and F's in all of his academic subjects. There was no obvious transfer from this study methods class to his scholastic performance in other classes.

There are other students who do no better work with their new skills, but who do the same amount of work in less time, or make a transfer of reading to undesirable reading situations, but not to school subjects. This is also unsatisfactory transfer. In each case the new skills are used, but not to perform better in school. So we can see that transfer from remedial reading classes to better scholastic performance cannot be considered as automatic.

The most common reason for referral to the remedial reading class, public or private, is unsatisfactory classroom performance. The parent who refers the child to a remedial reading class is hopeful that the remedial program will provide training which will enable his child to become a better student. The teacher who refers the child to a remedial teacher is hopeful that the training to be received will enable the student to become a better student. Certainly, the remedial teacher who receives these children is hopeful that as a result of her efforts, the child will be able to become a better student in the classroom. All of these interested persons may voice other objectives, and certainly some other objectives are entirely legitimate; however, most educators feel that the major purpose for reading in the elementary grades is to provide those skills which will enable a child to read well enough to study those materials which are generally required in the curriculum. Add to this the desirability of developing free reading habits and the picture is nearly complete.

Now, if better classroom performance is a major objective of a remedial reading program then it will be to our advantage to look at the various obstacles to proper transfer between the remedial program and the classroom. I could generalize my findings for you at this time, but I think it will be more meaningful to you if I talk about some experiences children have had with both successful and non-successful transfer of remedial reading skills.

A brief look at several cases will help to clarify each example of good and poor transfer. It is through the study of cases that an understanding of the various ramifications of transfer problems becomes most evident.

The cases which are described in this paper are authentic. For each of these examples there are many in the files which support them.

Let us first take a look at Joe T.

Joe came to receive remedial instruction while he was in the fourth grade. His school record to that time was one of failure in his second and third year. The history is one of family breakup. At the very time that reading problems started to occur, the father was called into the service during the Korean conflict. Joe's school IQ was measured at 107 and his reading level was 3.3 at the end of third grade. An individual intelligence test (Stanford Binet) measured his IQ at 140. After one year of remedial reading work he was reading at 7.7 grade level.

Joe started to pass all his subjects and he made good grades in some of them. His performance was not yet equal to his ability. Investigation showed that the parents were urging Joe to do his best and that they had provided him with literature at a level which interested him. They started him on a project in radio which developed into a major hobby and caused considerable reading. The school, however, chose to ignore clinic reports as to the boy's intellectual abilities. They claimed that he was an average boy doing average work. At school he was not urged to do much better and was not challenged. Shortly, Joe began to show a lack of interest in his school work. His grades dropped. Joe's parents decided to remove him from this school and to enroll him in another private school which administered an entrance test for grade placement. Because of the results of this test, Joe was placed one full grade level higher in this school. The new school took the reading clinic's reports with interest and treated Joe as a gifted boy. Joe now has a burning enthusiasm for school and, at last report, he was leading his class academically.

This situation is now, of course, a very happy one. But we must observe that it came very close to being one of failure and frustration because of a misunderstanding within the first school as to what a remedial program was doing for Joe.

Now let us look at David R. David was an average reader for his grade; but not for his intelligence. David was very bright (Binet IQ 128), but seemed to be satisfied with average school performance. In the clinic diagnosis, David was found to be a fast but careless reader. We found that he had rather immature eye movements for a fourth grader. Remediation involved a carefully regulated program which was basically orientational. Although the child responded to the lessons and made considerable improvement it seemed as though we were starting from the beginning with him at each lesson. We were able to maintain his speed, increase his comprehension abilities, and develop what we considered more mature reading skills. When he left the clinic he was reading well above his grade level and seemed confident of his new skills. Investigation produced the following results. David displayed few, if any, of the new skills in his classes and his grades never improved. Further investigation showed that the school had diagnosed the problem much as we had, but followed remediation which consisted of forcing the child to read more slowly. So, in sessions with us the boy was encouraged to use his normally fast reading skills and at school he was forced to read more slowly. David played the game well! He did what he was told in the clinic and he did what he was told in school. The net result was no permanent gain. We did not know what the school was doing; they did not know what we were doing. Although the child was able to make test score gains in the clinic, he was unable to practice these skills in school and quickly lost them.

The case of Dennis N. presents another type of transfer problem.

Dennis came to us as a third grader with a Binet IQ score of 90. Dennis was considered a non-reader since he could reading nothing at the third grade level, never read in school, and could not properly remember words which were taught him. Dennis started first grade when he was 6 1/2 years old. His reading level at the end of the third grade was 1.8. Dennis had good visual acuity, no measurable auditory loss and seemed to be healthy. Dennis was tutored by a highly enthusiastic student who succeeded in motivating the boy to work diligently to the point that he was able to read at a low third grade level. He was excited about these new skills and was dismissed from remediation; we felt that we had certainly succeeded with this boy. One year later we investigated Dennis's status in school. We were shocked to find that his fifth grade teacher considered him to be a non-reader. She said that Dennis had no interest in reading, never read in school and seemed incapable of remembering words which were taught to him. Our investigation in this case led us to examine the schools's procedures with this boy, and we found that they had cooperated with us and followed our suggestions. His home life was stimulating and highly satisfactory. In conversation with Dennis he told us that he couldn't read and that he did not like to read. We decided to check his visual abilities again. A visual examination indicated good acuity at the near point, but it also indicated serious fusion difficulties at the near point. Dennis received attention from an eye specialist and is again working on his reading skills. This case is one in which the boy was encouraged to read and did so because of his desire to please his teacher. But he could not see print clearly and comfortably; thus he did not want to read and did not continue to read when the pleasant teacher-pupil relationship was terminated. It can be observed that a child with a visual problem may work under high motivation and drive quite effectively for short periods of time. However, the child will not read enough to develop his new skills properly if the reading situation becomes one of discomfort and inability to see properly.

Grace D. presents a case in which the school, the home, and remedial program worked together and accomplished their purpose.

Grace was a below average student and the school listed her IQ as 92. She was shy and ineffective in school. She was tutored while in the fifth grade (reading at 4.7). Grace responded well to tutoring. There was considerable interest in the remedial program from the school and the parents. Grace seemed to be considerably brighter than her score from the intelligence test had measured. A more recent intelligence test measured her IQ at 110. After one semester of tutoring she raised her reading level to 7.2. Although this was a short period of remediation, Grace was discharged from our program as a child who had sufficient skills.

The story of Grace is a pleasant one from this point. The change appeared to take place immediately. Her home life is healthy and encouraging. The school recognizes her improved abilities and challenges her. Her grades have soared. Today she is considered an excellent student and excellent reader. She is no longer shy and withdrawn; rather she is a leader in the ninth grade. Grace's story has several characteristics:

1. Fairly early referral (fourth grade)
2. Proper diagnosis
3. Effective remediation
4. School acceptance of tutoring
5. School use of new reading skills
6. Proper parental interest and encouragement.

The case of Tom L. is one in which neither the school nor the remedial program could assume responsibility for poor transfer.

Tom was referred for remediation while in fifth grade. His intelligence was measured as average (Binet IQ 102), but he was making below average grades in school (D's). He was reading two grades below level (3.0). After a year of tutoring he raised his reading level to 6.1. During this time his grades in school improved about one letter grade. The clinic dismissed him at this time because it was felt that he had learned his new skills and was transferring them.

Here we have a case in which tutoring was successful but transfer was not possible. The school was understanding and attempted to make use of the newly formed skills. Investigation pinpointed the obstacle as the home. Both parents were working; the father during the day, the mother at night. The father spent the evening drinking and Tom was left to his own inclinations. The result was chaos. When I asked his grandmother where Tom was, she answered, "I don't know; out looking for his mother and father probably, because they are never home either." This is a case in which the parents made no follow-up of the work done in remediation and the child lacked the necessary direction to make successful transfer, despite school efforts.

As we look at these five cases, it becomes clear that many things may interfere with the transfer of newly acquired reading skills.

Today we will deal with one aspect of this problem; namely, how can the classroom teacher promote maximum transfer from the remedial reading program to the classroom? This question is not easy to answer and has several facets.

1. The classroom teacher must know the results of the tutoring. Normally this information should be furnished with all of the necessary data; however, if it is not furnished, then it is the teacher's responsibility to find out what has happened. The following information should be included and is of particular value.

a. What was the child's reading level before and after the remediation?

The teacher needs this comparison to be able to understand the rate of growth during the remediation program. It will also provide her with an idea of where classroom instruction should start.

b. What tests were used for diagnosis and for measurement of improvement?

The teacher should know this so that she can avoid using the same test with this child during the year. It will also be of value in interpreting test scores.

c. What pertinent information was revealed by this diagnosis?

Good remediation programs are preceded by a thorough diagnosis. The information obtained will be of great value to the teacher. This diagnosis often includes types of diagnostic measures which cannot easily be administered in the classroom. Group intelligence tests, administered before reading skills have been adequately developed, are likely to highly underrate the child. This has been noted in the cases cited and is very common with children who are engaged in remedial reading programs. Most remedial programs include an individual intelligence test as a part of diagnosis. This type of information should be of great value to the classroom teacher.

d. What was the nature of the remedial program? Which materials and techniques were of most value?

The classroom teacher might well use those materials and techniques which had proved useful with the child in the remedial program.

e. Did the remedial program offer any suggestions for success which could be followed by the classroom teacher?

Remedial teachers are often in a position of discharging from the remedial program a child who can continue to use corrective exercises. Most remedial teachers are eager to suggest follow-up activities which will better enable the student to make satisfactory progress upon his return to the classroom.

2. Secondly, the teacher should approach this child not only as one with a corrected reading problem, but also as a child with an experience of failure connected with classroom reading. The chances are that this child has a poor reading background. The classroom program then should not only be one designed to build on these newly acquired reading skills but also one which will use these skills to fill some of the gaps in this child's reading background. It will be to the advantage of all if this child can experience many pleasant and satisfying reading experiences as soon as possible in the classroom. It is imperative that the child realize that it is not only the remedial teacher who understands and cares for him. For intelligent guidance the classroom teacher must know the recreational reading level of the child, some of the child's interests, and sources of books which will satisfy his level and his interests.

3. In the classroom teacher's reading classes, this child should receive several

considerations. The teacher may have to consider re-grouping for this child. The teacher may need to spend some time helping this child individually to assist his transition from the remedial class to the classroom. A careful study of the report from the remedial teacher should provide the following insights to the teacher:

a. In what aspects of her program can the child work the best?
b. In what aspects will he need the most help?
c. Which reading situation has the child found most satisfying?
d. Which reading situation has least satisfaction for him?

If you will recall Joe T., he was almost lost because the school did not make adjustments in his school program after he returned from remedial instruction.

4. The classroom teacher, more than any other, is in a unique position to take advantage of this facet of transfer. The child may be guided into delightful reading experiences through success in another area of school work. The classroom teacher has many opportunities to observe the child's reactions to other situations and other studies and should use these observations when attempting to construct a useful remedial program.

5. The classroom teacher must remain alert to the child's visual performance. When a person who has seldom read starts to read a great deal there may be indications of visual annoyance never noticed by the school before. The child should be as visually comfortable as possible, and, if irritation is noticed, referral should be made. Most children will naturally avoid any situation which is physically uncomfortable. Some indications of visual irritation may be:

a. watering eyes
b. redness around the eyes
c. getting too close to the book
d. moving the head rather than the eyes
e. excessive following of the print with the finger

When these symptoms of visual discomfort are noticed, the child should be referred to a visual specialist.

In conclusion, let us remember that the classroom teacher is the key in this road back to school success. The cooperation and intelligent handling of the student by the classroom teacher can make the difference between a futile and ineffective remedial reading program and one which is effective and successful.

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THEORETICAL AND PHILOSOPHICAL ASPECTS OF LABORATORY EXPERIENCES IN SPECIAL EDUCATION

Gloria F. Wolinsky

A definition of laboratory experiences would probably include the statement that they precede remunerative employment, are designed to familiarize the student with de facto conditions, and, by nature, are experimental or exploratory.

In the not too distant past, higher education was considered an experience that was passed through, completed, and musingly contemplated upon as the years accumulated and the complexities of professional situations presented themselves. More recently, we have come to realize that in many areas of endeavor, formal school experiences may be terminated with the various academic degrees, but experiences, laboratory or otherwise, continue.

This is particularly the problem of teacher education; more sharply defined in special education.

In discussing theory, philosophy, and even practice, as we have taught our teachers to look at children; so must we, in turn, look at our students in terms of their needs and time of comprehension. For laboratory experience as a practical device is based on the premises that:

1. The teacher has been provided specific, technical, and current information that will assist him in his special role.
2. These experiences will assist the practitioner in making a decision within a framework of personal independence.
3. These experiences help him better understand his area of specialization as an instructional area.
4. These experiences help him better understand his role as a professional in relationship to his own field and other professional areas.

But as we look at experiences, it immediately becomes apparent that, while experience in terms of institutional framework does not change drastically, meaning, implication and use are in terms of the perceptual world of the viewer. What I am suggesting, therefore, is that the question is of process and structure of the experience rather than that of the function of the experience. For it is through the process that the various motives for teaching the exceptional can be vicariously explored and examined. The structure of the experience allows for an indirect examination of attitudes and comprehension, without the threat of a direct attack to the student.

We are aware that direct experiences give meaning to ideas and close the gap between knowing and doing (Lindzey, 1961, p.61). But the mere closure does not imply synthesis, or, for that matter, internalization. Direct experiences alone do not assure adequate performance. Experiences must be geared to the individual student, but this can only be done when a program has certain characteristics. By defining its purposes and knowing the goals it seeks, it can allow for flexibility within its specified function and, therefore, process becomes different for each individual.

The necessity of this approach becomes all too apparent when one looks at the students being prepared to teach the exceptional. There are basic differences and needs in the laboratory experiences of men and women at early adulthood who are tied up in the process of ego and role identity, of youthful exhuberance, dedication and energy, and a woman who returns after some years of child rearing to resume a professional career. The experimental world of the latter may have included an excellent liberal arts education, a president of the local P. T. A., a member of a local health group, and just 15-20 years more of living and learning.

The question of wanting to teach the exceptional because of personal experiences is a real one, and a cogent factor in providing laboratory experiences. Therefore, while providing clinics, laboratories, internships, student teaching, varying types of participation in course work and integrating seminars, we must also allow and plan for an intensity of experience. For instance, in planning for field visits, we have differentiated between the needs of students who prefer the anonymity of group visiting to absorb the realities of the handicap and the needs of those who can cope with an unescorted but intense visit that permits intensive questioning and response. In providing for reading assignments, to challenge some students and to help others understand the complexities of the circumscribed life that the exceptional lead, we have experimented with reading novels such as "The Magic Mountain" while still providing for a similar, but less intense, reading experience in books such as biographies and autobiographies of exceptional individuals. We have turned to the opera, to Rigoletto's impassioned aria, and to the pathos of La Bohème in order to meet the needs of our students. This semester, with some success, we have used Beethoven's Heilengestaadt testament to help explain the problems of acquired deafness. After hearing René DuBois' point of view concerning disease and social patterns as depicted in art, we are seriously considering sending those who can go, off to the museum to look at exceptionality through the eyes of the artists instead of the standard term paper.

"We should not underestimate our students or overestimate ourselves. We are so much concerned with what our students should know that we sometimes do not realize how much they already know" (Hoddenfield & Stennett, 1961, pp. 262-63). This statement by Dr. Rivlin, directed to the problems of general education, is even more pertinent for us in special education. For part of the theory that implies understanding of role and knowledge of the field, may be superimposed upon an extremely articulate and informed individual. Laboratory experience, then, must help mold the individual in a professional image and must wean the student from the emotionalized approach to the education and care of the exceptional.

Though "...we who study the scheme of life are ourselves bound by the limitations which we also find in the living things we study....." (Murphy, 1961, p.13) "The teacher must help the learner to believe in his own individuality and his capacity to learn" (Murphy, p. 47). Laboratory experiences are but a part of this help, with the added mandate of stimulating so that after the formalities are concluded, learning will still continue. Theory and philosophy, then, must concern themselves with professional as well as profession.

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AN OVERVIEW OF RESEARCH IN LEARNING, MOTIVATION, AND PERCEPTION

Edward Zigler

The areas of learning, motivation, and perception are three of the classic areas of experimental psychology and consequently are among the most highly developed in methodology, conceptual sophistication, and theory construction. Research workers in mental retardation who have entered these fields have both profited by and suffered from the previous extensive work. The designs, statistical analysis, and other formal aspects of their research are among the best in the field of mental retardation. It appears, however, that investigators have been unable to avoid the temptation of relying too heavily on the earlier work with animal subjects. Consequently, they have sometimes rather mechanically translated research designs developed in animal studies to their investigations of the mentally retarded. Although creative applications of the methods and results employed in animal studies to the study of the retarded may yield valuable information, it is unlikely that great progress will occur through the unimaginative translation of problems from one type of population to another. Such investigations meet the methodological requirements of good research, but add little to our understanding of mental retardation.

In addition to utilizing methodology which was developed for research with other types of subjects, investigators have tended to restrict their research to problems relevant to the populations investigated earlier. As a result, research has dealt with a narrow range of problems. For example, operant conditioning and discrimination learning have been studied to a far greater degree than such topics as complex learning, higher mental processes, classroom learning, and problem solving in social situations.

The mechanical translation and limitation of problems has resulted in the tendency to conceptualize the retarded child as sharing the psychological characteristics of lower animals. With this orientation, the research has been directed at the discovery of the differences between the behavior of normal and retarded subjects and less concern has been shown for the similarities in the behavior of normal and retarded individuals. It is clear that retarded individuals do not form a discrete group possessing characteristics not found in normal individuals. Since the intellectually retarded form the extreme of a continuous distribution, they should be considered as sharing in various degrees the characteristics found in the normal and superior segments of the distribution.

A major trend in general behavior theory is the consideration of learning, motivation, and perception as integrally interrelated processes. This trend has not been reflected in research with the mentally retarded, for studies with the retarded have tended to investigate these as discrete aspects of behavior. The failure to consider the motivational determinants of learning in the retarded has made many of the studies difficult to interpret and has restricted the generalizations that can be made from them. It is apparent that retarded individuals have motivational structures which differ from those of other persons because of their intellectual deficit, atypical social experiences, and particular environmental histories. Learning and perceptual studies which do not attempt to deal with motivational processes make it impossible to determine whether the atypical performance of retarded subjects reflects differences in learning and perceptual processes or differences in motivational structure. For example, recent re-evaluations (Gallagher, 1957; Osborn, 1960) of earlier studies indicate that some of the differences in performance reported between normal and different types of retarded subjects may be more parsimoniously explained by differences in motivation than by differences in perceptual and cognitive processes.

A significant feature of research in mental retardation is that, with the exception of the rigidity concept emanating from the work of Lewin (1936) and Kounin (1941), no theoretical position has emerged from research dealing with the learning, motivational, or perceptual behavior of the retarded. The present theoretical status of research in mental retardation is characterized by an eclecticism with a facade of theoretical sophistication. There has been an attempt to short-circuit genuine theory construction, since the empirical stages in the development of concepts concerning mental retardation have been avoided.

One of the requirements of theory is that it deal with and in fact be developed within the area in which the theory is to be employed. Theoretical concepts must be developed inductively, and their interrelationships must be specified before the conceptual network embodied in a theory can be evolved. The tendency to apply portions of such theoretical positions as those of Kohler, Rotter, Spence, Hebb, and others has stood in the way of development of theories or models which generate an integrated body of research with retarded individuals. A high value has been placed upon research derived from theory. This has deterred researchers from undertaking empirical research yielding the required data from which the inductive bases for theory construction might be developed. The over-enthusiastic utilization of the particular aspects of general theories which have some relevance for the behavior of retarded individuals has added to the tendency for research with the retarded to be narrow and to avoid some of the problems associated with mental retardation. There are practically no observational studies of learning, motivation, or perception in the retarded. These types of studies have been of value in increasing understanding of the behavior of non-retarded persons, and appear to be a necessary step for the development of theoretical considerations of mental retardation.

Conclusions

In assessing the current status of research in the areas of learning, motivation, and perception, several characteristics of the reseach with mentally retarded subjects are apparent. First, the extensive background of research in these areas has resulted in both advantages and disadvantages for the researcher in mental retardation. The primary advantage is the availability of well developed research methodology. The primary disadvantage is the tendency to apply the problems and designs of research with lower animals to investigations of the behavior of retarded individuals. Second, the interrelationships among learning, motivation, and perception have not been realized by researchers in mental retardation, and the research unrealistically has tended to deal with these as unrelated processes. Third, there has been premature emphasis on theoretical sophistication and, as a result, portions of existing theories have been applied to behavior of retarded individuals. This has deterred attempts at constructing theories of behavior which focus on the mentally retarded. The result of these shortcomings has been to make work with the retarded narrow, fragmentary, and unimaginative.

Current Promising Research

Although the conclusions just discussed generally characterize current research in this area, there are many studies which hold promise of opening new areas of research, of yielding information about practical problems in treatment and training of the mentally retarded, and of providing data from which theoretical positions might be developed.

There has been a series of recent studies investigating the relative significance of CA, MA, and IQ for learning in retarded individuals. From such studies information is being obtained concerning the effects of the experience and physical maturation associated with CA, the cognitive development associated with MA, and the relationship between the two. It is possible from such studies to obtain a more comprehensive interpretation of the consequences for learning when intellectual level is incommensurate with chronological age. It is obvious that the ability to predict the behavior of retarded subjects will be increased by the specification of the relationship between experimental factors and mental development. This specification will be possible only when subjects are matched on more than such global measures as CA and MA. Such variables as etiology, past histories, and specific aspects of intellectual functioning must eventually be considered in matching groups of subjects.

There have been several recent investigations re-evaluating behavioral differences in learning and perception between familial and organic retardates. The results have revealed smaller differences than those previously reported. This work suggests that the nature of intellectual deficit does not differ between the two types of individuals to the degree previously believed, and that difference in performance previously found may be related to differences in motivational structure. Recent studies have shown that familials tend to be drawn from a narrow portion of the general population, while organics are drawn from a broader segment of the general population. Thus, class differences previously found in general learning and motivation undoubtedly operate with retarded children. The literature on social class provides insight into the types of controls which are appropriate in studying different types of retarded individuals.

A concept which has had tremendous influence in generating research for nearly 30 years is that of rigidity, or behavioral stereotype. This concept was utilized in an effort to deal with observed behavior in retarded individuals, and has been of significance not so much for its validity as for the large number of studies which have been stimulated by it. The concept has been employed in each of the areas under consideration. These studies are especially significant, for they have shown that the often observed behavioral rigidity of the retarded is multiply determined by such factors as intellectual level, institutionalization, past history of success and failure, type of reward employed, and relationship with adults. Further investigations of the antecedents and consequences of rigidity would appear to provide a fruitful path to the construction of a more comprehensive theory of retarded functioning.

Another promising body of research in mental retardation is the recent work being done in comparing the performance of institutionalized and noninstitutionalized retardates. Usually, comparisons have been made of institutionalized retarded and noninstitutionalized normal subjects. It is impossible from these latter studies to determine the relative contribution of institutionalization and retardation to the learning and motivational differences found between the two groups of individuals. Institutionalization has been shown to affect the relative efficacy of various types of rewards for modifying behavior, the reluctance of retarded individuals to become involved in adult-initiated tasks, and the differential effectiveness of supportive adults on different types of behavior. Such factors have forced a re-evaluation of the nature of mental retardation independent of the effects of institutionalization. Attention must be paid continuously to the problem of sampling in studies of institutionalized individuals. Consideration must be given not only to effects of institutionalization itself, but also to the selective factors which may operate in determining what types of individuals are institutionalized.

Associated with the work on the effects of institutionalization are the recent studies concerned with the pre-institutional history of retarded individuals. An inordinate amount of social deprivation is found to be commonly experienced by the institutionalized retarded. This deprivation has significant effects on performance in a variety of tasks and on the effects of institutionalization as well.

Recent general work has indicated that the ability to perform complex learning tasks is closely related to the ability to utilize verbal cues. Luria (1956) has emphasized the deficiency in the use of verbal cues by the mentally retarded and has advanced this as the basis for their learning difficulties. Although few learning studies have been done which experimentally manipulate the degree to which verbal cues can be employed, they appear to provide extremely valuable information about this possible deficiency in the retarded. It would be of great significance to know whether the learning process of retarded individuals is characterized by this difference in utilization of verbal cues, and whether such a deficiency might be compensated for by the utilization of other types of cues, such as those provided by the motoric system. Research in this area may also be important in discovering the basis for the discrepancies often reported between the verbal and performance scores obtained by retardates in conventional intelligence tests.

There have recently been many different approaches to the investigation of the motivational characteristics of the retarded. These have centered primarily around the concepts of anxiety, achievement, and developmental changes in motivation for different types of incentives. Performance in learning and perceptual tasks has been found to differ with the strength and type of motivation operative. As previously noted, an understanding of the retarded has been hampered by the failure to consider the contribution of motivational factors to performance. For example, the high level of anxiety of retarded children may play as significant a role in their learning as low mental age. An understanding of the significance of different types of rewards for normal individuals of different developmental levels as well as retarded individuals is necessary before a comprehensive evaluation of the contribution of motivational differences to differences in learning and perception will be forthcoming.

Recently, the effect of stimuli from the physical environment on the behavior of retarded children has been investigated in a series of studies concerned with distractability, activity level, and curiosity. Studies of these types provide information concerning the differential effects of external environmental stimuli on behavior as a function of intellectual level. One of the common characteristics ascribed to retarded children is a short attention span. Retarded children are said to be distracted by peripheral environmental stimuli. Investigations of the validity of such a proposal and of the variables which influence this characteristic have immediate value for the understanding and learning of perceptual processes in the retarded. Most of the studies have been concerned with demonstrating differences between retardates and normals in their sensitivity to environmental stimuli, rather than dealing with the antecedents of such behavior.

Acquisition of information when the individual is not in a formal learning situation is highly dependent upon curiosity. Investigations of curiosity in the retarded should provide information relevant to the problem of their learning potential. Closely related to curiosity is incidental learning, or learning without awareness. While earlier studies were concerned with the demonstration of the existence of incidental learning in retarded children, current studies are investigating the variables which are significantly associated with performance in such learning tasks. These studies give further information about the effects of peripheral stimuli on the behavior of retarded subjects.

Conclusions

The discussion above does not provide a complete coverage of the recent work in learning, perception, and motivation, but does offer examples of work which hold promise for increasing our knowledge in these areas of retarded functioning. It is significant that most of these studies are in their initial stages and have only begun to scratch the surface of the problems being raised. There is a myriad of meaningful research problems which could be undertaken in these areas. It is of considerable significance that many of these areas are being explored by relatively young research workers who give every indication that they will continue to do important work.

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